АКАДЕМИЈА ИНЖЕЊЕРСКИХ НАУКА СРБИЈЕ
Одељење рударских, геолошких и системских наука

Предлог за иностраног члана
Др Марија Д. Илић, професор емеритус, дипл. инж. електротехнике

На предлог Одељења рударских, геолошких и системских наука, на седници Председништва АИНС одржаној 14.07.2021. одређени смо у Комисију за писање реферата за избор за иностраног члана АИНС професора др Марије Д. Илић, дипломираног инжењера електротехнике. У складу са Статутом и Правилником о изборима АИНС достављамо:

Р Е Ф Е Р А Т

1. Биографски подаци

Др Марија ИЛИЋ је рођена 1951.г. у Зајечару где је завршила основну школу и гимназију. Дипломирала је и магистрирала на Електротехничком факултета Универзитета у Београду. На Универзитету Вашингтон, Ст. Луис, Мисури, стекла је магистратуру на департману Системске науке и математика. Докторирала је на истом факултету 1980.г. са темом у области примене графова на моделирање електроенргетских система. Била је професор и истраживач и на неколико водећих америчких универзитета, укључујући Корнел, Илиноис, Карнеги Мелон и МИТ. Удата је и мајка тројице синова. Оснивач је релативно мале компаније у којој је данас главни истраживач и саветник.

Др М. Илић је сада професор у пензији са Кернеги Мелон Универзитета. Има позицију *Најстарији саветник* у Енергетској групи на МИТ Лабораторији за информатику и контролу. Члан је Америчке инжењерске академије и Европске академије наука, секција Информатика.

2. Научни резултати

Др М. Илић је дала запажене доприносе системском истраживачком инжењерству у области комплексних електроенергетских система. У први план су квантитативни приступи изучавању нових физичких феномена који су проузроковани стресним условима преноса енергије преко великих географских раздаљина. Посебан нагласак је на системе који имају стохастичке изворе енергије, као што су соларни системи и ветрењаче. У стресним условима јавља се феномен познат као „колапс напона" јер доводи до прекида довода енергије потрошачима. Резултати теоријских истраживања и практичних реализација које је др М. Илић представила у многим публикацијама, послужили су као основа за методе системске контроле које спречавају прекиде.
Фундаментални проблем у дизајнирању ``интелигентних енергетских система" неопходних за поуздану и економску електрификацију без великих ефеката на климу је флексибилнија производња, пренос и потрошња енергетских извора. Др М. Илић је релативно рано у својој каријери допринела идеји да успешно решење захтева бољи приступ моделирању и контроли. Њен концепт назван *DyMonDS* (*Dynamic Monitoring and Decision System*) је развијен на Карнеги Мелон Унивезитету. Заснован на основним законима конзервације енергије, тај концепт дефинише минималну информацију потребну за дизајнирање аутоматике и контроле на разним нивоима хиерархије енергетских система.
Др М. Илић је допринела формулисању следећих проблема и развоју метода за њихово решавање:

- Моделирање и контрола хијерархијских енергетских система у нормалним условима.
- Моделирање и контрола нелинеарне динамике енергетских система у ненормалним оперативним условима.
- Генерални приступ моделирању и контроли сложених система.
- Моделирање и контрола тржишта енергетике и пројектовање финансијских подстицаја
- Моделирање и контрола система са стохастичким енергетским изворима, соларни и ветрогенератори.

Др М. Илић је у свом истраживању дефинисала теоријску основу за креирање будућих енергетских система који су динамичнији и комплекснији од постојећих. Концепт *DyMonDS* се сматра основом за будућу контролу енергетских система.

3. Инжењерски и научни резултати

Др М. Илић је активно учествовала и руководила реализацијом разноврсних инжењерских пројеката из области енергетских система од којих овде истичемо: (а) Сарадња са *Electricite de France* на развијању боље напонске контроле у регионима енергетског система и моделирање за терцијалну контролу целог енергетског система; резултати тог рада су имплементирани у Енергетском конторлном центру у Паризу, Француска; (б) Први дизајн нелинеарне аутоматске напонске контроле генератора, и демонстрација могућих бенефита на енергетском систему у Североистоку Америке; (в) Коришћење *DyMonDS* система да се покаже да Азурска острва у Португалу могу да се потпуно снабдевају струјом из нефосилних енергетских извора; (г)

софтверски програм за оптимизацију располагајућих извора снаге да би се најефикасније и најпоузданије обебеђивала струја потрошачима под разним временским условима (примена у Северној Енглеској); (д) Водила је тим истраживача и инжењера који су показали нову архитектуру система у Порторику да би се обезбедила струја критичним потрошачима за време великих временских непогода. Др М. Илић има 8 регистрованих патената.
Следећи подаци сведоче о научним резултатима др М. Илић: 40 публикованих књига или поглавља у књигама, 130 радова публикованих у референтним светским часописима, 384 радова саопштених на научним скуповима са рецензијама, 96 техничких извештаја и радова саопштених на стручним и научним скуповима. Према подацима са „гугл сколарс-а“ (6. Јун 2021) др М. Илић има: 16008 цитата, h-индекс 65, i10 индекс 246.

4. **Наставна активност**

Др М. Илић је провела 4 деценије као професор и предавач на неколико водећих универзитета у САД. Она је развила своју школу – посматрање сложених енергетских система као категорије комплексних динамичких система који имају богату структуру модела. Ти модели формирају основу увођења генералних принципа моделирања, симулације, и контроле неопходних за систематско управљање таквим ситемима. Деценијама је развијала и усавршавала тај приступ и објавила неколико књига на ту тему. др М. Илић је развила курсеве који повезују тржиште енергетике са принципима коришћења извора енергије. МИТ је њен курс који описује принципе моделирања и управљања енергетским системима који захтевају модернизацију, ставио јавно доступним тако да га је лета 2021.г. узело више од 2,000 људи широм света. Др М. Илић је одржала 349 предавања по позиву на универзитетима и скуповима широм света. Била је ментор израде 49 докторских дисертација и 36 мастерских теза. Добила је титулу емеритус професора на Универзитету Карнеги Мелон, Питсбург, САД.

5. **Организационе активности**

Др М. Илић је активна у Институту електричних и електронских инжењера (ИЕЕЕ) чији је почасни доживотни члан. Била је члан многих радних група, организовала је више конференција, националних и интернационалних, радила је као едитор и коедитор у многим професионалним публикацијама. На Кернеги Мелон Универзитету је организовала 10 годишњих конференција. Две године је радила као директор програма Национална наука САД.

6. **Остали релевантни доприноси**

Др М. Илић је за своје доприносе добила преко двадесет награда и признања, од награде за постигнуте резултате у студирању, коју јој је доделио Град Београд (1974), преко награда за најбољи рад у секцији управљање системима на *ЕТАН*-у (1978) и за најбољи рад на Интернационалној ИЕЕЕ конференцији о паметним комуникационим мрежама (2013), до најновије награде *Истакнути едукатор (просветитељ) у енергетици*, које додељује Друштво за енергетику (*Power and Energy Society IEEEE*) (2020).

7 **Међународна сарадња**

Блиско је сарађивала са колегама са Електротехничког факултета у Београду и са Техничког факултета у Новом Саду. Имала је богату међународну сарадњу, посебно са институцијама у Холандији, Португалу и Јапану.

8. **Закључак**

Комисија констатује да др Марија Д. Илић, кандидат за избор за иностраног члана АИНС, испуњава све услове које предвиђају нормативни акти АИНС и са задовољством предлаже да се изабере као иностран члан АИНС у Одељењу за рударске, геолошке и системске науке.

Београд, 03. 09. 2021.

КОМИСИЈА

Проф. др Слободан Вујић

Проф. др Мирко Вујошевић

Проф. Александар Гајић

АКАДЕМИЈА ИНЖЕЊЕРСКИХ НАУКА СРБИЈЕ
Одељење рударских, геолошких и системских наука

КРАТКА БИОГРАФИЈА НА СРПСКОМ

МАРИЈА Д. ИЛИЋ, проф. емеритус на Универзитету *Карнеги Мелон*, Питсбург, САД

Марија Д. Илић је рођена 1951.г. у Зајечару где је завршила основну школу и гимназију. Дипломирала је на Електротехничком факултету у Београду, на одсеку Електроника и телекомуникације, смер Управљање системима, магистрирала такође на ЕТФ на смеру Управљање системима и докторирала на Универзитету Вашингтон, *Сент Луис*, САД, у области системских наука и математике.

Своју професионалну каријеру започела је у Институту „Михајло Пупин“, ООУР Аутоматика, где је провела нешто мање од две године (1976-77). Ради свог усавршавања преселила се у САД где и данас живи. Удата је и има три сина.

Марија Д. Илић је радила и била ангажована у настави и у реализацији бројних научних пројеката као и консултантских активности на више Универзитета у САД и у државним и приватним фирмама које се баве управљањем у електроенергетским системима. Тренутно има следећа ангажовања: почасни (емеритус) професор за области електротехнике и рачунарства на Универзитету Карнеги Мелон; гостујући професор и научни саветник у Лабораторији за информационе системе и системе одлучивања Масачусетског технолошког института (*МИТ*); саветник Лабораторије Линколн при *МИТ*; научни оснивач и руководилац Новог софтвера за пренос електричне енергије у Масачусетсу, *МИТ*.

Њен истраживачки и научни рад је у области системских и рачунарских наука. Дала је значајне доприносе за научна и практична решавања проблема управљања у сложеним техничким и економским системима, пре свега у електроенергетици.

Марија Д. Илић је за своје доприносе добила преко двадесет награда и признања, од награде за постигнуте резултате у студирању, коју јој је доделио Град Београд (1974), преко награда за најбољи рад у секцији управљање системима на *ЕТАН*-у (1978) и за најбољи рад на Интернационалној ИЕЕЕ конференцији о паметним комуникационим мрежама (2013), до најновије награде *Истакнути едукатор (просветитељ) у енергетици*, које додељује Друштво за енергетику (*Power and Energy Society IEEEE*) (2020).

Марија Д. Илић је од 2020.г. члан *Националне инжењерске академије* САД (која има око 2000 чланова из САД и света). Члан је (од 2020) и *Европске академије* у секцији *Информатика*.

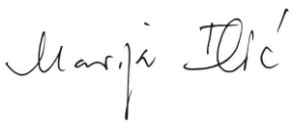
Марија Д. Илић је у својој биографији са библиографијом (C.V.) дала детаљне податке о својим научним и стручним постигнућима од којих се овде наводе следећи квантитативни показатељи:

- 8 патената,
- 40 наслова пуликованих књига или поглавља у књигама,
- 130 наслова радова публикованих у референтним светским часописима,
- 384 наслова радова саопштених на научним скуповима са рецензијама,
- 96 наслова техничких извештаја и радова саопштених на стручним и научним скуповима,
- 349 наслова позваних предавања на универзитетима и скуповима,
- 49 наслова докторских теза којима је била ментор,
- 36 наслова мастерских теза којима је била ментор.

Према подацима са „гугл сколарс-а“ (6. Јун 2021) Марија Д. Илић има: 16008 цитата, h-индекс 65, i10 индекс 246 .

Сагласност

Ово је моја потврда да сам сагласна да будем номинована за иностраног члана Академије инжењерских наука Србије.



Marija Ilić

Senior Research Scientist
Laboratory for Information and Decision Systems
Massachusetts Institute of Technology

Professor Emerita
Carnegie Mellon University
Electrical and Computer Engineering
Engineering and Public Policy

УМЕСТО ПОТВРДЕ О ДРЖАВЉАНСТВУ

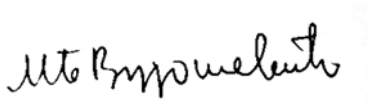
Поштоване колеге,

У складу са одлукама са седнице ОРГСН у прилогу достављам на једној страници документ са основним подацима о предлогу за избор проф. Марије Д. Илић за иностраног члана АИНС.

Њен C.V. у формату .pdf (72 странице) доставио сам раније.

У вези са њеним држављанством одговорила ми је електронском поштом да су њен пасош и остала са аспекта држављанства важећа лична документа **искључиво америчка.**

Прилог: скениран пасош
Скенирани пасош налази се у документацији АИНС.



Проф. др Мирко Вујошевић

Marija D. Ilić

Massachusetts Institute of Technology
MIT Visiting Professor, IDSS
77 Massachusetts Ave., Room 32-D726
Cambridge, MA 02139
ilic@mit.edu
office: 617-324-0645
http://eesg.mit.edu

Carnegie Mellon University
Professor Emerita
ECE Dept.
5000 Forbes Avenue
Pittsburgh, PA 15213
cell: 412-260-2471
http://www.eesg.ece.cmu.edu/

Lincoln Laboratories
Permanent Senior Staff
Energy Systems Group 73
244 Wood Street, Room S1-246
Lexington, MA 02421
office: 781-981-9012
cell: 781-674-6032

Education

- **D.Sc. in Systems Science and Mathematics** 1980
  Department of Electrical and Systems Engineering, Washington University, St. Louis, MO

- **M.Sc. in Systems Science and Mathematics** 1978
  Department of Electrical and Systems Engineering, Washington University, St. Louis, MO

- **MEE in Electrical Engineering** 1977
  Department of Electrical Engineering, University of Belgrade, Yugoslavia

- **Dipl. Ing. in Electrical Engineering** 1974
  Department of Electrical Engineering, University of Belgrade, Yugoslavia

Research Interests

Smart Grids as a means of implementing sustainable IT-enabled electricity services; Modeling and control of future electric energy systems (transforming hierarchical into open-access systems); Modeling and control of economic, policy and technical interactions in dynamic systems under uncertainties (applied to electricity markets); Critical infrastructures and their interdependencies (cyber-physical systems); Computer methods and algorithms for simulating large-scale dynamic systems; Electric power systems modeling; Design of monitoring, control and pricing algorithms for electric power systems; Normal and emergency control of electric power systems.

Work Experience

- **Carnegie Mellon University, Pittsburgh, PA**
  Professor Emerita 8/2017-present
  ECE/EPP

- **Massachusetts Institute of Technology, Cambridge, MA**
  Visiting Professor 9/2016-present
  Institute for Data, Systems, and Society (IDSS)
  Research Scientist with PI privilege, Laboratory for Information and Decision Systems (LIDS)

- **Lincoln Labs, Lexington, MA**
  Permanent Senior Staff 2/2016-present

- **New Electricity Transmission Software (NETSS), Inc.**
  Founder and Chief Scientist 2016-present

- **Massachusetts Institute of Technology, Cambridge, MA**
  Visiting Scientist 6/2012-5/2013
  MIT Energy Initiative (MITEI)

- **Massachusetts Institute of Technology, Cambridge, MA**
  Visiting Professor 12/2003-11/2005
  Engineering Systems Division
- **Carnegie Mellon University, Pittsburgh, PA**
  Professor (tenured) 10/2002-7/2017
  ECE/EPP
- **Massachusetts Institute of Technology, Cambridge, MA**
  Senior Research Scientist 9/1989-6/2003
- **Massachusetts Institute of Technology, Cambridge, MA**
  Visiting Associate Professor 9/1987-09/1989
- **University of Illinois**
  Associate Professor (with tenure) 8/1986-08/1989
- **University of Illinois**
  Assistant Professor 8/1984-08/1986
- **General Electric Corp.**
  Visiting Researcher 6/1984-08/1984
  R&D Center
- **Cornell University**
  Assistant Professor 1/1982-06/1984
- **Drexel University**
  Assistant Professor 8/1981-07/1982
- **Institute for Automation and Telecommunications "Michael Pupin," Belgrade**
  Principal Research Engineer 9/1976-08/1977

Consulting

General Electric R&D Center	9/1985-09/1987
Decision Systems, International Inc. R&D Center	1988-1991
New England Electric Service Co.	9/1989-09/1991
The Analytic Science Co.	9/1989-09/1991
The ENMASS Co.	1990
Power Technologies, Inc.	1/1990-12/1990
Martin Marietta Energy Systems, Inc.	1991
Brattle/IRI, Inc., Senior Advisor	1994-present
The Tabors and Caramanis Associates. Co.	1995
Standard Poor's (Energy)	1997
Fulcrum International, Inc.	1997
New Electricity Transmission Software Solutions (NETSS), Inc.	2002-present
California Independent System Operator (CA-ISO)	2002
Federal Energy Regulatory Commission (FERC)	2003
Charles River Research, Inc (for First Energy, Inc.)	2004
Foundation of Science and Technology (FCT), Portugal	2007

EnvaPower	2007
EdF-Electricite de France	2008
UTRCC United Technologies Research Center	2008
EdF-Electricite de France	2009
Canada Foundation for Innovation	2012

Awards

City of Belgrade,Yugoslavia award for special achievements in scholastic work, 1974.

Dr. Dusan Mitrovic Award for best paper in the Automation Group, XXI Yugoslavian Conference on Electronics, Telecommunications and Automation, 1978.

Dr. V. Bedjanic Award for outstanding results published in the Master of Electrical Engineering Degree Thesis, Yugoslavia, 1978.

First Presidential Young Investigator Award for Electric Power Systems, National Science Foundation, 1984–1989.

Best paper award (Control Area) IEEE Power Electronics Systems Conf., Toulouse, France, 1985.

Xerox Faculty Award, College of Engineering, University of Illinois, 1986.

University Scholar Award, University of Illinois, 1987

Best student paper award (advisor/co-author), 34th IEEE Conference on Decision and Control, New Orleans, LA, 1995.

Best PhD Thesis Advisor Award, MIT Technology Policy Program, 1998.

Who's Who of American Women, 2004-2005.

Honorary Chaired Professor for Control of Future Electricity Network Operations at Delft University of Technology in Delft, The Netherlands, 2008–2013.

Alumni Achievement Award, Washington University, St Louis, 2010.

Phillip L. Dowd Fellowship Teaching Award, CIT Carnegie Mellon University, 2010.

Top 100 Movers and Shakers in Green Tech, 2010.

Steven J. Fenves Award for Systems Research, CIT Carnegie Mellon University, 2012.

Best Paper Award (advisor/co-author) at the IEEE International Conference on Smart Grid Communications, Tainan, Taiwan, 2012.

Best Paper Award (advisor) at the 45th North American Power Symposium (NAPS), Manhattan, KS, 2013.

Ranking First in all Papers (advisor/co-author) at the IEEE International Conference on Smart Grid Communications, Vancouver, Canada, 2013.

IEEE Life Fellow, 2017.

IEEE PES Outstanding Power Engineering Educator Award, Marija Ilic for contributions to mentorship and education on modeling and control in power engineering
https://site.ieee.org/pes-enews/2020/06/30/ieee-pes-society-awards-2020/

Elected Ordinary Member of Academia Europaea https://www.ae-info.org 2020

Elected as a Member of Mathematical Institute of Serbian Academy of Sciences and Arts (MISANU), Belgrade, Serbia. The Mathematical Institute of the Serbian Academy of Sciences and Arts (MISANU) is a unique centre for mathematically-oriented fundamental and technological research in Ser-

bia, 2020.

Presented with the Albert Nelson Marquis Lifetime Achievement Award by Marquis Who's Who https://www.24-7 pressrelease.com/press-release/472107/marija-d-ilic-dsc-presented-with-the-albert-nelson-marquis-lifetime-achievement-award-by-marquis-whos-who

US National Academy of Engineering (NAE) elected, 2021.

Professional Service:

Government Committees, Civic Appointments, Board Memberships

US Department of Energy, 1996.

National Science Foundation, Expert for Power Systems Program 1999.

State of Massachusetts, Panel on Y2K utility readiness, House Committee on Science and Technology, 1999.

National Science Foundation, Program Director (appointed, 50% time), Sept 1999-March 2001.

OSTP/NSF Workshop on Long-Term R&D Needs for Critical Infrastructures and their Inter-dependencies, White House, Washington, D.C., Co-Initiator, June 14-15, 2001.

NSF/DOE/EPRI Sponsored Workshop on Future Research Directions for Complex Interactive Electric Networks, Washington, D.C., Organizer, November 16-17, 2000.

National Science Foundation, 2002

NSF Workshop Responding to the Unexpected, , New York City, Organizing Committee, February 27-March 1, 2002.

California Energy Commission on Distributed Energy Resources Project, Technical Advisory Committee, 2003.

National Science Foundation, 2003.

Lawrence Livermore National Laboratory, 2003.

US Department of Energy, 2005.

National Science Foundation, 2005.

National Science Foundation, 2006.

NSF Planning Meeting on Cyber-Physical Systems Workshop, Oct 16-17, University of Texas, Austin, TX (invited), 2006.

NSF Workshop on Monitoring and Controlling the Nation's Critical Infrastructures, Arlington, VA, Participant, November 2006.

Washington University, ECE Department, St. Louis, MO, External Advisory Board, 2007-present.

Pennsylvania House Republican Policy Committee, Hearing held at Carnegie Mellon regarding energy issues for development of energy policy, Delivered Testimony, September 5, 2007.

Environmental Policy Agency (EPA) (via PQA) , Panel Chair, 2008.

National Science Foundation, 2008.

New York Independent System Operator (NYISO) Reactive Power Working Group (RPWG) Member, 2009.

North American Electric Reliability Council (NERC), Smart Grid Task Force, R&D Group Leader (nominated), 2009.

IEEE Conference on Decision Control, Technical Program Committee, 1986.

Control Systems Society, Energy Technical Committee, Vice-Chair, 1986-1988.

IEEE Central Illinois Section, Vice Chair, 1986-1987.

IEEE Transactions on Circuits and Systems, Associate Editor for Large Scale Systems Networks, 1987-1989.

American Control Conference, Technical Program Committee and Vice Chair, 1988.

Professional Service (continued):

Membership and Activities in Professional Societies

Energy Technical Committee, Chair, 1988-1991.

IEEE Conference on Decision Control, Publications Chair, 1988.

IEEE Control Systems Magazine, Special Issue on Energy Systems, Guest Editor, June 1988.

American Control Conference, Program Chair, 1989.

International Journal on Electric Power Energy Systems, Associate Editor, 1989–present.

Control of Power Conversions Systems, Workshop on Variable Structure, Program Committee, June 1991.

IEEE China Power Conference, Co-Chair, Sept. 1991.

IEEE Conference on Decision and Control, Technical Program Committee, 1992.

CIGRE (Conference Internationale des Grands Reseaux Electriques a Haute Tension), Task Force on Voltage Problems, U.S. Representative, 1992–1996.

International Symposium on Circuits and Systems, Workshop Organizer, May 1992.

IEEE Transactions, Circuits and Systems, Associate Editor, 1993-1995.

IEEE Conference on Control Applications, Program Committee, 1995.

Stanford University, Energy Modeling Forum Working Group 15, Member, 1995–2005.

Special Issue on Flexible AC Transmission Systems (FACTS), Guest Editor, March 1995.

Power Systems Computer Conference (PSCC), Program Committee, 1996.

Annual North American Power Symposium, Organizing Committee, 1996.

IEEE Power Systems, Distinguished Lecturer, 1997–2005.

International Conference on Power System Automation and Control, Program Committee, 1997.

IASTED Conference on High Technology in the Power Industry, Program Committee, 1997.

IEEE Working Group on Voltage Control, Guest Editor, Chairman, 1998–2002.

IEEE Panel on Value and Cost of Reactive Power Control, Organizer and Chair, August 1999.

Journal on Discrete Event Dynamic Systems, Special Issue on Power Systems, November 1999.

IEEE-USA Technical Committee on Energy Policy, Member, May 2000-present.

Academic Press, Inc., Encyclopedia of Energy, Associate Editor, 2002-2003.

International Journal of Electrical Power & Energy Systems, Associate Editor, 2003–present.

International Advisory Board, Electric Utility Deregulation, Restructuring and Power Technologies, Hong Kong, April 5-8, 2004.

Proceedings of the IEEE, "Power Technology and Policy—Forty Years After the 1965 Blackout.?'" Special Issue, Invited Guest Editor, November 2005.

IEEE Transactions on Circuits and Systems, Associate Editor, 2006-2007.

Energy Panel, Chair, in charge of reviewing 33 proposals in the energy area for FCT, Portugal (invited), 2006.

HCSS National Workshop on Information Technology, "Beyond SCADA," Co-Organizer, Pittsburgh, March 2006.

Proceedings of the IEEE, Associate Editor, 2007–2010.

PSERC Carnegie Mellon University, Executive Committee, Representative, 2007.

IEEE Transactions on Smart Grids, Editorial Board, 2009–present.

National Conference on R&D Needs in Future Cyber Physical Energy Systems, Baltimore, MD, Co-Organizer, June 2009.

Proceedings of the IEEE, Special Issue on Future Energy Systems, Editor (invited), 2010.

Proceedings of the IEEE, Special Issue on Network Systems Engineering for Meeting Energy and Environment Future, vol. 99, no.1, Invited Guest Editor, January 2011.

TU Delft, International Conference on Networking, Sensing and Control, Delft, Netherlands, General Chair, April 2011.

NOW publishers, Foundations and Trends in Systems Electric Energy, Editor-in-Chief, 2012–present.

IEEE SmartGridComm Symposium, Vancouver, Canada, TPC Co-chairs, October 2013.

Sustainable Energy Grids and Networks, Editorial Boar https://www.journals.elsevier.com/sustainable-energy-grids-and-networks/editorial-board

The IEEE Transactions on Control Systems Technology, Senior Editor http://ieeecss.org/publication/transactions-control-systems-technology/editors

Annual Reviews in Control Editorial Board https://www.journals.elsevier.com/annual-reviews-in-control/editorial-board/

Energy Systems Research Editorial Board http://esrj.ru/index.php/esr/about/editorialTeam

International Journal of Power & Energy Systems https://www.elsevier.com/journals/international-journal-of-electrical-power-and-energy-systems/0142-0615?generatepdf=true

IEEE PES Outstanding Power Engineering Educator Award, Committee Member, 2021

Other Major Contributions

- Carnegie Mellon University Electricity Conference, Organizer and Co-Founder (with Lester Lave), 2004–2014.
- Electric Energy Systems Group (EESG), Formed at Carnegie Mellon, 2006–present. http://www.eesg.ece.cmu.edu
- Led the design of the Interactive Power System Simulator (IPSYS) at Carnegie Mellon. This software has become an integral part of electric power systems education and research, 2007. http://www.ece.cmu.edu/∼nsf-education/software.html.
- Carnegie Mellon University Annual Electricity Conferences, Organizer, 2011–2015. http://www.ece.cmu.edu/ electricityconference.
- "Smart Grid in a Room" Simulator (SGRS). This is becoming an open-access, end-to-end, software for demonstrating impact of new technologies and electricity markets on electric power system dynamics. It is a result of an ongoing collaboration with the U.S. National Institute of Standards (NIST) on electric power, demonstrating impact of new technologies and electricity markets on electric power system dynamics.
- Leading software development for Simulator of Future Aircraft Systems by the NETSS team. NASA funded SBIR, Phase II, 2016–2018.
- Scalable Electric Power System Simulator (SEPSS), currently leading development of this at MIT/MIT LL; outgrowth of SGRS, 2016–present.
- Led development and testing of AC Extended Optimal Power Flow (ACXOPF) by the New Electricity Transmission Software (NETSS), Ilic: Founder/Owner, 2016–present.

Patents

- J.W. Chapman, M.D. Ilić , "Decentralized Excitation Control for an Electrical Power Utility System," US Patent No. 5483147, Jan. 1996.
- M.D. Ilić and X.Z. Liu, "Method and Apparatus for Direct Control of Inter-area Dynamics in Large Electric Power Systems," US Patent No. 5517422, May 1996.
- M.D. Ilić and A. Hsu, "A General Method for Distributed Line Flow computing with Local Communication in Meshed Electric Networks: applications to Distributed Line Power Flow Calculations with Minimal Communications," US Patent No. 2013/0024168 A1, Jan. 2013.
- S. K. Aivaliotis, Z. R.Stelmak, R. D. Mohr, M.D. Ilić, J. H. Lang, B. Fardanesh, M. R.Graham, L. Menemenlis-Hopkins, J. Mayadas-Dering, G. K. Stefopoulos, "System and method for power grid management," US Patent No. 8738191 B2, May 2014.
- M.D. Ilić and S. Cvijic, "Contingency Screening in Multi-Control Area Electrical Power Systems Using Coordinated DC Power Flow," US Patent No. 9 625 887, 2017.
- M.D. Ilić, Miao, X. and Jaddivada, R., "Plug-and-Play Reconfigurable Electric Power Microgrids," U.S. Patent 10,656,609, issued May 19, 2020.
- M.D. Ilić and Jaddivada, R., "Exergy/Energy Dynamics-based Integrative Modeling and Control Method for Difficult Electric Aircraft Missions," U.S. Patent Application Docket No. MIT-403AUS, filed November 30, 2018.
- M.D. Ilić and Jaddivada, R., "Methods and Systems for Secure Scheduling and Dispatching Synthetic-regulation Reserve from Distributed Energy Systems," U.S. Patent Application Docket No. MIT-403AUS, filed November 30, 2018.

Books

[1.1] M.D. Ilić. Reactive power: Fundamentals, problems and solutions. In G. Sheble, editor, *IEEE Special Publications*, pages 1–78. IEEE, San Francisco, CA (2nd edition New York, NY, 1988), 1987.

[1.2] M.D. Ilić. Modern approaches to modeling and control of electric power systems. In *Control and Dynamic Systems, Vol. 41*, pages 1–78. Academic Press Inc., 1991.

[1.3] M.D. Ilić and S.X. Liu. *Hierarchical Power Systems Control: Its Value in a Changing Electric Power Industry*. Series on Advances in Industrial Control. 1996.

[1.4] M.D. Ilić, L. Hyman, E. Allen, R. Cordero, and C.N. Yu. Interconnected system operations and expansion in a changing industry: Coordination vs. competition. In S. Awerbuch and A. Preston, editors, *The Virtual Utility: Accounting, Technology & Competitive Aspects of the Emerging Industry*, pages 307–332. Topics in Regulatory Economics and Policy Series, Kluwer Academic Publishers, 1997.

[1.5] M.D. Ilić, F.D. Galiana, and L. Fink, editors. *Electric Power Systems Restructuring: Engineering and Economics*. 1998. 2 editions.

[1.6] Z. Younes and M.D. Ilić. Transmission networks and market power. In *Electric Power Systems Restructuring: Engineering and Economics*, pages 337–386. Kluwer Academic Publishers, 1998.

[1.7] F.D. Galiana and M.D. Ilić. Power systems operation: Old vs. new. In *Electric Power Systems Restructuring: Engineering and Economics*, pages 15–107. Kluwer Academic Publishers, 1998.

[1.8] F.D. Galiana and M.D. Ilić. Framework and methods for the analysis of bilateral transactions. In *Electric Power Systems Restructuring: Engineering and Economics*, pages 108–128. Kluwer Academic Publishers, 1998.

[1.9] R. Coxe and M.D. Ilić. System planning under competition. In *Electric Power Systems Restructuring: Engineering and Economics*, pages 285–335. Kluwer Academic Publishers, 1998.

[1.10] J. Cardell and M.D. Ilić. The control and operation of distributed generation in a competitive electric market. In *Electric Power Systems Restructuring: Engineering and Economics*, pages 453–518. Kluwer Academic Publishers, 1998.

[1.11] E.H. Allen and M.D. Ilić. *Price-Based Commitment Decisions in the Electricity Market*. Series on Advances in Industrial Control. November 1998.

[1.12] L. Fink and M.D. Ilić. Engineering requirements for transmission system control with decentralized generation control. In S. Awerbuch, L.S. Hyman, and A. Vessey, editors, *Unlocking the Benefits of Restructuring: A Blueprint for Transmission*. Public Utilities Reports, Inc. Vienna, VA, Nov 1999.

[1.13] M.D. Ilić. Power-system control. In *Handbook for Power System Calculations*, chapter 12. Mc-Graw Hill, 2000.

[1.14] Y. Yoon and M.D. Ilić. Transmission expansion in the new environment. In L. Lai, editor, *Power System Restructuring and Deregulation: Trading, Performance and Information Technology*, chapter 5, pages 267–287. John Wiley & Sons, 2000.

[1.15] M.D. Ilić and J. Zaborszky. *Dynamics and Control of Large Electric Power Systems*. May 2000. (900 pages).

[1.16] P. Skantze and M.D. Ilić. *Valuation Hedging and Speculation in Competitive Electricity Markets: A Fundamental Approach*. 2001.

[1.17] Y.T. Yoon and M.D. Ilić. Transmission expansion in the new environment. In L.L. Lai, editor, *Power System Restructuring and Deregulation: Trading, Performance and Information Technology*, pages 134–167. John Wiley & Sons, Ltd., 2001.

[1.18] M.D. Ilić. Automating operation of large electric power systems over broad ranges of supply/demand and equipment status. In J. Chow, F.F. Wu, and J. Momoh, editors, *Applied Mathematics for Restructured Electric Power Systems*, chapter 6, pages 105–137. Kluwer Academic Publishers, 2004.

[1.19] M.D. Ilić and J. Zaborszky. Electric power systems engineering. In C.J. Cleveland, editor, *Encyclopedia of Energy, Vol. 2*, pages 267– 287. Elsevier Academic Press, Boston, 2004.

[1.20] C.J. (Editor-in-Chief) Cleveland and M.D. (one of the Editors) Ilić, editors. *Encyclopedia in Energy*. April 2004.

[1.21] Z. Lukszo, M.P.C. Weijnen, R.R. Negenborn, B. De Schutter, and M.D. Ilić. Challenges for process system engineering in infrastructure operation and control. In W. Marquardt and C. Pantelides, editors, *9th International Symposium on Process Systems Engineering; 16th European Symposium on Computer Aided Process Engineering*, pages 95–100. Elsevier B.V., 2006.

[1.22] M.D. Ilić and M. Jelinek. Changing paradigms in electric energy systems. In R.W. Kunneke, J. Groenwegen, and J-F. Auger, editors, *The Governance of Network Industries: Institutions, Technology and Policy in Regulated Infrastructures, Studies in Evolutionary Political Economy*, pages 134–167. MPG Books Group, UK, 2009.

[1.23] L. Xie and M.D. Ilić. Module-based interactive protocol for integrating wind energy resources with guaranteed stability. In R.R. Negenborn, Z. Lukszo, and J. Hellendoorn, editors, *Intelligent Infrastructures*. Springer, Berlin, Germany, 2009.

[1.24] M.D. Ilić. The future of electricity systems: General trends, developments, in securing electricity supply in the cyber age: Exploring the risk of information and communication technology. In C.T. Leondes, editor, *Tomorrow's Electricity Infrastructure*, volume 41, pages 13–32. Springer Topics in Safety, Risk, Reliability and Quality, 2010.

[1.25] M.D. Ilić. Modern approaches to modeling and control of electric power systems. In C.T. Leondes, editor, *Control and Dynamic Systems: Advances in Theory and Applications*, volume 41, pages 1–78. 2011.

[1.26] M.D. Ilić and Q. Liu. Toward sensing, communications and control architectures for frequency regulation in systems with highly variable resources. In *Control and Optimization Theory for Electric Smart Grids*, chapter 1. 2011.

[1.27] M.D. Ilić and A. Chakrabortty, editors. *Control and Optimization Methods for Electric Smart Grids*. 2012.

[1.28] S. Cvijic, M.D. Ilić, and Q. Liu. Distributed multiparty DC power flow algorithm with secure exchange of information. In *Control of Cyber-Physical Systems*, Lecture Notes on Control and Information Sciences. Springer, 2013**.

[1.29] M.D. Ilić and Q. Le, X. Liu, editors. *Engineering IT-Enabled Sustainable Electricity Services: The Tale of Two Low-Cost Green Azores Islands*. Springer, August 2013.

[1.30] C.Y. Tee and M.D. Ilić. Toward valuing flexibility in transmission planning. In Hong Chen, editor, *Power Grid Operation in a Market Environment: Economic Efficiency and Risk Mitigation*, pages 219–250. IEEE Press, Willey, 2017.

[1.31] S. Junlakarn and M.D. Ilić. *Toward Reconfigurable Smart Distribution Systems for Differentiated Reliability of Service*, chapter 18. In Ilić et al. [29], August 2013.

[1.32] Jhi-Young Joo, Jonathan Donadee, and Marija Ilić. *Assessing the Ability of Different Types of Loads to Participate in Adaptive Load Management*. In Ilić et al. [29], August 2013.

[1.33] Jhi-Young Joo, Yingzhong Gu, Le Xie, Jonathan Donadee, and Marija Ilić. *Look-ahead Model-Predictive Coordinated Generation and Demand Dispatch Methods for Managing Uncertainties*. In Ilić et al. [29], August 2013.

[1.34] Jonathan Donadee, Jhi-Young Joo, Remco Verzijlbergh, and Marija Ilić. *Generation and Demand Characteristics of the Islands of Flores and São Miguel*. In Ilić et al. [29], August 2013.

[1.35] K. D. Bachovchin, M. Cvetkovic, and M. D. Ilić. *Transient Stabilization in Systems with Wind Power*, chapter 19. In Ilić et al. [29], August 2013.

[1.36] Botterud A., N. Abdel-Karim, and M. D. Ilić. *Generation Planning under Uncertainty with Variable Resources*, pages 535–552. In Ilić et al. [29], August 2013.

[1.37] A. Chakrabortty and M.D. Ilić, editors. *Control and Optimization Methods for Electric Smart Grids*. 2015. Chinese Simplified.

[1.38] M.D. Ilić. *Toward a Unified Modeling and Control for Sustainable and Resilient Electric Energy Systems*. Foundations and Trends in Electric Energy Systems: Vol. 1: No. 1-2. Now Publishers, 2017. http://dx.doi.org/10.1561/3100000002.

[1.39] M.D. Ilić, R. Jaddivada, X. Miao, and N. Popli. Toward multi-layered MPC for complex electric energy systems. In S.V. Rakovic and W. Levine, editors, *Handbook of Model Predictive Control*, pages 625–663. Birkhäuser, 2019**.

[1.40] M.D. Ilić, R. Jaddivada, A. Gebremedhin, Unified Modeling for Emulating Electric Energy Systems: Toward Digital Twin that Might Work Milutinović, V. and Kotlar, M., editors, *Handbook of Supercomputing*, IGI Global, Hershey, PA, US, 2021.

Papers in Refereed Journals

[2.1] M.D. Ilić and M. Calovic. Multicriteria approach to optimal operation of power systems. *Electric Power Systems Research*, 2:145–153, 1979.

[2.2] M. Ilić. Multicriteria approach to optimal operation of power systems. *Automatica*, May 1977. (Yugoslavian journal).

[2.3] M. Ilić-Spong and J. Zaborszky. A different approach to load flow. *IEEE Transactions on Power Apparatus and Systems*, PAS-101(1):168–179, Jan 1982.

[2.4] J. Zaborszky, M. Ilić-Spong, and K.W. Whang. Homogeneous, nonlinear load-flow algorithms for HV-AC and compound HV-AC-DC systems. *International Journal on Electrical Power and Energy Systems*, 4, October 1982. 233-244.

[2.5] M. Ilić-Spong, N. Katz, and J. Zaborszky. Block diagonal dominance for systems of nonlinear equations with application to load flow calculations in power systems. *International Journal on Mathematical Modeling*, 5:275–297, December 1984.

[2.6] M. Ilić-Spong, M. Spong, and R. Fischl. The no-gain theorem and localized response for the decoupled $P - \theta$ power network with active power losses included. *IEEE Transactions on Circuits and Systems*, 32(2):170–177, Feb 1985.

[2.7] J.S. Thorp, M. Ilić-Spong, and M. Varghese. An optimal secondary Voltage-Var control technique. *IFAC Automatica*, 22:217–221, 1986.

[2.8] M. Ilić-Spong, J. Thorp, and M. Spong. Localized response performance of the decoupled Q-V network. *IEEE Transactions on Circuits and Systems*, 33(3):316–322, Mar 1986.

[2.9] J. Thorp, M. Ilić-Spong, and D. Schulz. Reactive power–voltage problem: Conditions for the existence of solution and localized disturbance propagation. *International Journal on Electrical Power and Energy Systems*, 8:66–74, April 1986.

[2.10] M. Ilić-Spong and A. Phadke. Redistribution of reactive power flow in contingency studies. *IEEE Transactions on Power Systems*, 1(3):266–274, Aug 1986.

[2.11] M. Ilić-Spong, T. J. E. Miller, S. R. Macminn, and J. S. Thorp. Instantaneous torque control of electric motor drives. *IEEE Transactions on Power Electronics*, PE-2(1):55–61, Jan 1987.

[2.12] J. Zaborszky, M. Ilić-Spong, G. Huang, and F. Dobraca. Computer control of the large power system during faults for inherently adaptive selective protection. *IEEE Transactions on Power Systems*, 2(2):494–504, May 1987. **.

[2.13] M. Ilić-Spong, R. Marino, S. Peresada, and D. Taylor. Feedback linearizing control of switched reluctance motors. *IEEE Transactions on Automatic Control*, 32(5):371–379, May 1987. **.

[2.14] M.D. Ilić and J. Zaborszky. Fundamentals of reactive power modeling and control. *IEEE Transactions on Power Systems special publication*, pages 61–114, July 1987. 87EH0262-6-PWR.

[2.15] J. Medanic, M. Ilić-Spong, and J. Christensen. Discrete models of slow voltage dynamics for under load tap-changing transformer coordination. *IEEE Transactions on Power Systems*, 2(4):873–880, Nov 1987. **.

[2.16] M. Ilić-Spong, M. L. Crow, and M. A. Pai. Transient stability simulation by waveform relaxation methods. *IEEE Transactions on Power Systems*, 2(4):943–949, Nov 1987. **.

[2.17] M. Ilić-Spong, M. L. Crow, and M. A. Pai. Transient stability simulation by waveform relaxation methods. *IEEE Power Engineering Review*, PER-7(11):37–38, Nov 1987. **.

[2.18] M. Ilić-Spong, J. Christensen, and K. L. Eichorn. Secondary voltage control using pilot point information. *IEEE Transactions on Power Systems*, 3(2):660–668, May 1988. **.

[2.19] H. J. Sira-Ramirez and M. Ilić. A geometric approach to the feedback control of switch mode DC-to-DC power supplies. *IEEE Transactions on Circuits and Systems*, 35(10):1291–1298, Oct 1988. **.

[2.20] M. Ilić. Energy systems control. *IEEE Control Systems Magazine Special Issue on Energy Systems Control*, pages 3–4, January 1989.

[2.21] M. Ilić. New approaches to voltage monitoring and control. *IEEE Control Systems Magazine*, 9(1):5–11, Jan 1989.

[2.22] H. Sira-Ramirez and M. Ilić. Exact linearization in switched-mode DC to DC power converters. *International Journal of Control*, 50:511–524, Aug 1989. **.

[2.23] M. L. Crow and M. Ilić. The parallel implementation of the waveform relaxation method for transient stability simulations. *IEEE Transactions on Power Systems*, 5(3):922–932, Aug 1990. **.

[2.24] M. Ilić and W. Stobart. Development of a smart algorithm for voltage monitoring and control [of power systems]. *IEEE Transactions on Power Systems*, 5(4):1183–1193, Nov 1990. **.

[2.25] M. Ilić and A. Stankovic. Voltage problems on transmission networks subject to unusual power flow patterns. *IEEE Transactions on Power Systems*, 6(1):339–348, Feb 1991. **.

[2.26] A. Stankovic, M. Ilić, and D. Maratukulam. Recent results in secondary voltage control of power systems. *IEEE Transactions on Power Systems*, 6(1):94–101, Feb 1991. **.

[2.27] C. A. King, J. W. Chapman, and M. D. Ilić. Feedback linearizing excitation control on a full-scale power system model. *IEEE Transactions on Power Systems*, 9(2):1102–1109, May 1994. **.

[2.28] D.J. Tylavsky and Co-Chairman A. Bose. Parallel processing in power systems computation. *IEEE Transactions on Power Systems*, 7(2):629–638, May 1992. M.D. Ilić, co-contributor.

[2.29] R. Chedid, N. LaWhite, and M.D. Ilić. A comparative analysis of dynamic models for performance calculation of grid-connected wind turbine generators. *Wind Engineering*, 17:168–182, 1993. **.

[2.30] M. D. Ilić, J. R. Lacalle-Melero, F. Nishimura, W. Schenler, D. Shirmohammadi, A. Crough, and A. Catelli. Short-term economic energy management in a competitive utility environment. *IEEE Transactions on Power Systems*, 8(1):198–206, Feb 1993. **.

[2.31] F.K. Mak and M.D. Ilić. Classification of voltage problems in electric power systems. *International Journal on Electrical Power and Energy Systems*, 15:377–385, April 1993. **.

[2.32] F. Nishimura, R. D. Tabors, M. D. Ilić, and J. R. Lacalle-Melero. Benefit optimization of centralized and decentralized power systems in a multi-utility environment. *IEEE Transactions on Power Systems*, 8(3):1180–1186, Aug 1993. **.

[2.33] J. W. Chapman, M. D. Ilić, C. A. King, L. Eng, and H. Kaufman. Stabilizing a multimachine power system via decentralized feedback linearizing excitation control. *IEEE Transactions on Power Systems*, 8(3):830–839, Aug 1993. **.

[2.34] R. Chedid, N. LaWhite, and M. Ilić. Simulating dynamic interactions of grid-linked wind turbines. *IEEE Computer Applications in Power*, 7(4):46–49, Oct 1994. **.

[2.35] M. Yehia, R. Chedid, M. Ilić, A. Zobian, R. Tabors, and J. Lacalle-Melero. A global planning methodology for uncertain environments: application to the Lebanese power system. *IEEE Transactions on Power Systems*, 10(1):332–338, Feb 1995. **.

[2.36] M.D. Ilić. Editorial. *International Journal on Electrical Power Energy Systems*, pages 1–2, September 1995. Special Issue.

[2.37] M.D. Ilić. Fundamental engineering problems and opportunities in operating power transmission grids of the future. *International Journal on Electrical Power Energy Systems*, pages 207–214, September 1995. (Special Issue).

[2.38] M.D. Ilić and X.S. Liu. A modeling and control framework for operating large-scale electric power systems under present and newly evolving competitive industry structures. *Journal on Mathematical Problems in Engineering*, 1:317–340, October 1995. (invited). **.

[2.39] M. D. Ilić, Xiaojun Liu, G. Leung, M. Athans, C. Vialas, and P. Pruvot. Improved secondary and new tertiary voltage control. *IEEE Transactions on Power Systems*, 10(4):1851–1862, Nov 1995. **.

[2.40] E. H. Allen, J. W. Chapman, and M. D. Ilić. Effects of torsional dynamics on nonlinear generator control. *IEEE Transactions on Control Systems Technology*, 4(2):125–140, Mar 1996. **.

[2.41] M.D. Ilić, F.C. Graves, L.H. Fink, and A. DiCaprio. A framework for operations in competitive open access environment. *The Electricity Journal*, 9:61–69, April 1996. Special Issue on Restructuring of the Utility Industry. **.

[2.42] A. Zobian and M. D. Ilić. A steady state voltage monitoring and control algorithm using localized least square minimization of load voltage deviations. *IEEE Transactions on Power Systems*, 11(2):929–938, May 1996. **.

[2.43] M. Ilić. A summer of shortage. *Public Utilities Fortnightly*, July 1996.

[2.44] M.D. Ilić and L. Hyman. Getting it right the first time: The value of transmission and high technologies. *The Electricity Journal*, 9:8–17, November 1996.

[2.45] M. Yehia, R. Chedid, Z. Jaber, M.D. Ilić, and A. Zobian. An improved dynamically allocated data structure for power system problems. *The International Journal of Modeling and Simulation*, pages 61–65, 1997. **.

[2.46] M. Ilić, Y.T. Yoon, A. Zobian, and M.E. Paravalos. Toward regional transmission provision and its pricing in New England. *Utilities Policy*, 6:245–256, 1997. **.

[2.47] M. Ilić, S.X. Liu, B.D. Eidson, C. Vialas, and M. Athans. A new structure-based approach to the modeling and control of electric power systems in response to slow reactive power/voltage load variations. *IFAC Automatica*, 33:515–531, March 1997. **.

[2.48] N. LaWhite and M. D. Ilić. Vector space decomposition of reactive power for periodic nonsinusoidal signals. *IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications*, 44(4):338–346, Apr 1997. **.

[2.49] A. Zobian and M. D. Ilić. Unbundling of transmission and ancillary services. I. Technical issues. *IEEE Transactions on Power Systems*, 12(2):539–548, May 1997. **.

[2.50] M. D. Ilić, Y. T. Yoon, and A. Zobian. Available transmission capacity (ATC) and its value under open access. *IEEE Transactions on Power Systems*, 12(2):636–645, May 1997. **.

[2.51] A. Zobian and M. D. Ilić. Unbundling of transmission and ancillary services. II. Cost-based pricing framework. *IEEE Transactions on Power Systems*, 12(2):549–558, May 1997. **.

[2.52] L. Fink, M. Ilić, and F.D. Galiana. Transmission access rights and tariffs. *Electric Power Systems Research*, 43:197–206, June 1997.

[2.53] L. Hyman and M.D. Ilić. Will consumers benefit from new power era? *Forum on Applied Research and Policy*, 12:59–68, June 1997.

[2.54] M. Ilić, L. Hyman, E.H. Allen, and Z. Younes. Transmission scarcity: Who pays? *The Electricity Journal*, 10:38–49, July 1997. **.

[2.55] L. Hyman and M.D. Ilić. Scarce resource, real business or threat to profitability? *Public Utilities Fortnightly*, October 1997.

[2.56] M. Ilić, F.D. Galiana, L.H. Fink, A. Bose, P. Mallet, and H. Othman. Transmission capacity in power networks. *Electrical Power and Energy Systems*, 20:99–110, 1998.

[2.57] F. D. Galiana and M. Ilić. A mathematical framework for the analysis and management of power transactions under open access. *IEEE Transactions on Power Systems*, 13(2):681–687, May 1998.

[2.58] M. Ilić. Benefits of deregulation: Who pays for reliability? *Energia*, September 1998. invited.

[2.59] Z. Younes and M. Ilić. Generation strategies for gaming transmission constraints: Will the deregulated electric power market be an oligopoly? *Journal of Decision and Support Systems*, 24(3-4):207–222, 1999. (Special Issue on Restructuring of the Electric Power Industry). **.

[2.60] CN Yu, J-P Leotard, and M. Ilić. Dynamic transmission provision in competitive electric power industry. *Discrete Event Dynamic Systems: Theory and Applications*, 9:351–388, 1999. Kluwer Academic Publishers, Boston, MA. **.

[2.61] E. Allen, M. Ilić, and Z. Younes. Providing for transmission in times of scarcity: An ISO cannot do it all. *Electrical Power and Energy Systems*, pages 147–163, 1999. (Special Issue on Deregulation). **.

[2.62] Chien-Ning Yu, Yong T. Yoon, M. D. Ilić, and A. Catelli. On-line voltage regulation: the case of New England. *IEEE Transactions on Power Systems*, 14(4):1477–1484, Nov 1999. **.

[2.63] E. H. Allen and M. D. Ilić. Reserve markets for power systems reliability. *IEEE Transactions on Power Systems*, 15(1):228–233, Feb 2000. **.

[2.64] J.F. Prada and M.D. Ilić. Pricing reliability: A probabilistic approach. *Energetica*, 23:75–89, July 2000. Columbia. **.

[2.65] M. Ilić and P. Skantze. Electric power systems operation by decision and control. The case revisited. *IEEE Control Systems*, 20(4):25–39, Aug 2000. **.

[2.66] E. H. Allen and M. D. Ilić. Interaction of transmission network and load phasor dynamics in electric power systems. *IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications*, 47(11):1613–1620, Nov 2000. **.

[2.67] M. Ilić. Eulogy for RTOs-Interregional is better. *Public Utilites Forthnightly*, October 2000. 35352.

[2.68] M. Ilić and L. Hyman. Don't rush the seamstress: Second thoughts on the marriage of the northeast grids. *Public Utilities Fortnightly*, September 2001.

[2.69] M. Ilić, J.R. Arce, Y. Yoon, and E. Fumagalli. Assessing reliability in the new environment. *The Electricity Journal*, pages 55–67, March 2001.

[2.70] M. Ilić, P. Skantze, and P. Visudhiphan. Electricity troubles in california: Who's next? *IEEE Spectrum*, 38(2):11–13, Feb 2001. **.

[2.71] E. Allen, N. LaWhite, Y. Yoon, J. Chapman, and M. Ilić. Interactive object-oriented simulation of interconnected power systems using SIMULINK. *IEEE Transactions on Education*, 44(1):87–94, Feb 2001. **.

[2.72] M. Ilić, E. Hsieh, and P. Ramanan. Transmission pricing of distributed multilateral energy transactions to ensure system security and guide economic dispatch. *IEEE Transactions on Power Systems*, 18(2):428–434, May 2003. **.

[2.73] S. Talukdar, J. Apt, M. Ilić, L. Lave, and M. Granger. Cascading failure: Survival versus prevention. *The Electricity Journal*, pages 25–31, November 2003.

[2.74] J. Apt, L. Lave, S. Talukdar, M. Granger, and M. Ilić. Electrical blackouts: A systemic problem. *Issues in Science and Technology*, 2004.

[2.75] P. Skantze, M. Ilić, and A. Gubina. Modeling locational price spreads in competitive electric power applications for transmission rights valuation and replication. *Institute of Mathematics and Its Applications - Journal of Management Mathematics (Oxford University Press*, 15:291–319, 2004. Special Issue on Optimisation for the De-Regulated Electrical Power Industry.

[2.76] M. Ilić, J. Apt, P. Khosla, L. B. Lave, M. G. Morgan, and S. Talukdar. Introducing electric power into a multidisciplinary curriculum for network industries. *IEEE Transactions on Power Systems*, 19(1):9–16, Feb 2004.

[2.77] E. Fumagalli, J. W. Black, I. Vogelsang, and M. Ilić. Quality of service provision in electric power distribution systems through reliability insurance. *IEEE Transactions on Power Systems*, 19(3):1286–1293, Aug 2004. **.

[2.78] A. Botterud, M. D. Ilić, and I. Wangensteen. Optimal investments in power generation under centralized and decentralized decision making. *IEEE Transactions on Power Systems*, 20(1):254–263, Feb 2005. **.

[2.79] M. D. Ilić, H. Allen, W. Chapman, C. A. King, J. H. Lang, and E. Litvinov. Preventing future blackouts by means of enhanced electric power systems control: From complexity to order. *Proceedings of the IEEE*, 93(11):1920–1941, Nov 2005. **.

[2.80] A. Minoia, D. Ernst, M. Dicorato, M. Trovato, and M. Ilić. Reference transmission network: a game theory approach. *IEEE Transactions on Power Systems*, 21(1):249–259, Feb 2006. **.

[2.81] Marija Ilić. The intellectual challenge behind bundling diverse energy systems of the future. *MIT Engineering Systems Division (ESD) Newsletter*, January 2006. invited.

[2.82] Seth Blumsack, Lester Lave, and Marija Ilić. A quantitative analysis of the relationship between congestion and reliability in electric power networks. *The Electricity Journal*, 28(4), 2007.

[2.83] M. D. Ilić. From hierarchical to open access electric power systems. *Proceedings of the IEEE*, 95(5):1060–1084, May 2007.

[2.84] Marija Ilić, Jason W. Black, and Marija Prica. Distributed electric power systems of the future: Institutional and technological drivers for near-optimal performance. *Electric Power Systems Research*, 77(9):1160–1177, July 2007. http://dx.doi.org/10.1016/j.epsr.2006.08.013 **.

[2.85] E. H. Allen, J. H. Lang, and M. D. Ilić. A combined equivalenced-electric, economic, and market representation of the Northeastern Power Coordinating Council U.S. Electric Power System. *IEEE Transactions on Power Systems*, 23(3):896–907, Aug 2008.

[2.86] Le Xie and Marija D. Ilić. Structure-preserving dynamical model and distributed stabilization of electricity infrastructures with renewable energy resources. *International Journal of Critical Infrastructures: Special Issue on Agent-based Technologies for Modeling Networked Infrastructures*, 2009.

[2.87] Marija Ilić. 3Rs for power and demand: Dynamic monitoring and decision systems maximize energy resources. *Public Utilities Fortnightly Magazine*, December 2009. http://www.fortnightly.com/fortnightly/2009/12/3rs-power-and-demand.

[2.88] Audun Botterud, Tarjei Kristiansen, and Marija Ilić. The relationship between spot and future prices in the Nord Pool Electricity Market. *Energy Economics*, 32(5):967–978, 2010. http://dx.doi.org/10.1016/j.eneco.2009.11.009 **.

[2.89] L. Xie and M.D. Ilić. Module-based modeling and control of electric power systems with renewable energy resources for guaranteed stability performances. *International Journal of Critical Infrastructures: Special Issue on Agent-based Technologies for Modeling Networked Infrastructures*, 6(2):131–147, 2010.

[2.90] M. D. Ilić, L. Xie, U. A. Khan, and J. M. F. Moura. Modeling of future cyber-physical energy systems for distributed sensing and control. *IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans*, 40(4):825–838, July 2010.

[2.91] M. D. Ilić. Dynamic monitoring and decision systems for enabling sustainable energy services. *Proceedings of the IEEE*, 99(1):58–79, Jan 2011.

[2.92] Y. Zhang, M. D. Ilić, and O. K. Tonguz. Mitigating blackouts via smart relays: A machine learning approach. *Proceedings of the IEEE*, 99(1):94–118, Jan 2011.

[2.93] M. D. Ilić, L. Xie, and J. Y. Joo. Efficient coordination of wind power and price-responsive demand; Part I: Theoretical foundations. *IEEE Transactions on Power Systems*, 26(4):1875–1884, Nov 2011.

[2.94] L. Xie, P. M. S. Carvalho, L. A. F. M. Ferreira, J. Liu, B. H. Krogh, N. Popli, and M. D. Ilić. Wind integration in power systems: Operational challenges and possible solutions. *Proceedings of the IEEE*, 99(1):214–232, Jan 2011.

[2.95] G. Andersson, M. D. Ilić, V. Madani, and D. Novosel. Network systems engineering for meeting the energy and environmental dream [scanning the issue]. *Proceedings of the IEEE*, 99(1):7–14, Jan 2011.

[2.96] N. Rotering and M. Ilić. Optimal charge control of plug-in hybrid electric vehicles in deregulated electricity markets. *IEEE Transactions on Power Systems*, 26(3):1021–1029, Aug 2011.

[2.97] M. D. Ilić, J. Y. Joo, L. Xie, M. Prica, and N. Rotering. A decision-making framework and simulator for sustainable electric energy systems. *IEEE Transactions on Sustainable Energy*, 2(1):37–49, Jan 2011.

[2.98] M. D. Ilić, L. Xie, and J. Y. Joo. Efficient coordination of wind power and price-responsive demand; Part II: Case studies. *IEEE Transactions on Power Systems*, 26(4):1885–1893, Nov 2011.

[2.99] R. A. Verzijlbergh, M. O. W. Grond, Z. Lukszo, J. G. Slootweg, and M. D. Ilić. Network impacts and cost savings of controlled EV charging. *IEEE Transactions on Smart Grid*, 3(3):1203–1212, Sept 2012.

[2.100] Jose' M. Chamorro, Luis M. Abadie, Richard de Neufville, and Marija Ilić. Market-based valuation of transmission network expansion: A heuristic application in GB. *Energy*, 44(1):302–320, August 2012. Proceedings of the Integration and Energy System Engineering European Symposium on Computer-Aided Process Engineering 2011.

[2.101] M. Honarvar Nazari, M. Ilić, and J. Peas Lopes. Small-signal stability and decentralized control design for electric energy systems with large penetration of distributed generators. *IFAC Control Engineering Practice*, 20(9):823–831, 2012.

[2.102] L. Rao, X. Liu, M. D. Ilic, and J. Liu. Distributed coordination of internet data centers under multi-regional electricity markets. *Proceedings of the IEEE*, 100(1):269–282, Jan 2012.

[2.103] J. M. Chamorro, L. .M Abadie, R. de Neufville R, M. Ilić. Market-based valuation of transmission network expansion. A heuristic application in GB. *Energy*, Aug 1;44(1):302-20, 2012.

[2.104] P. D. F. Ferreira, P. M. S. Carvalho, L. A. F. M. Ferreira, and M. D. Ilić. Distributed energy resources integration challenges in low-voltage networks: Voltage control limitations and risk of cascading. *IEEE Transactions on Sustainable Energy*, 4(1):82–88, Jan 2013.

[2.105] Q. Li, T. Cui, Y. Weng, R. Negi, F. Franchetti, and M. D. Ilić. An information-theoretic approach to PMU placement in electric power systems. *IEEE Transactions on Smart Grid*, 4(1):446–456, March 2013.

[2.106] S. Cvijic and M.D. Ilić. Distributed multiparty DC power flow algorithm with secure exchange of information. *In, Control of Cyber-Physical Systems*, 2013. Springer: Lecture Notes on Control and Information Sciences.

[2.107] J. Y. Joo and M. D. Ilić. Multi-layered optimization of demand resources using Lagrange dual decomposition. *IEEE Transactions on Smart Grid*, 4(4):2081–2088, Dec 2013.

[2.108] S. Cvijic and M. D. Ilić. Part I: A new framework for modeling and tracing of bilateral transactions and the corresponding loop flows in multi-control area power networks. *IEEE Transactions on Power Systems*, 29(6):2706–2714, Nov 2014.

[2.109] M. H. Nazari and M. Ilić. Dynamic modelling and control of distribution energy systems: comparison with transmission power systems. *IET Generation, Transmission Distribution*, 8(1):26–34, Jan 2014.

[2.110] K. D. Bachovchin and M.D. Ilić. Automated modeling of power system dynamics using the lagrangian formulation. *International Transactions on Electrical Energy Systems*, 2014.

[2.111] M. Cvetkovic and M. D. Ilić. Ectropy-based nonlinear control of FACTS for transient stabilization. *IEEE Transactions on Power Systems*, 29(6):3012–3020, Nov 2014.

[2.112] J. Donadee and M. D. Ilić. Stochastic optimization of grid to vehicle frequency regulation capacity bids. *IEEE Transactions on Smart Grid*, 5(2):1061–1069, March 2014.

[2.113] S. Cvijic and M. D. Ilić. Part II: PAR flow control based on the framework for modeling and tracing of bilateral transactions and corresponding loop flows. *IEEE Transactions on Power Systems*, 29(6):2715–2722, Nov 2014.

[2.114] S. Junlakarn and M. Ilić. Distribution system reliability options and utility liability. *IEEE Transactions on Smart Grid*, 5(5):2227–2234, Sept 2014.

[2.115] Y. Weng, M. D. Ilić, Q. Li, and R. Negi. Convexification of bad data and topology error detection and identification problems in AC electric power systems. *IET Generation, Transmission Distribution*, 9(16):2760–2767, 2015.

[2.116] Y. Weng, R. Negi, C. Faloutsos, and M. D. Ilić. Robust data-driven state estimation for smart grid. *IEEE Transactions on Smart Grid*, PP(99):1–12, 2016.

[2.117] J.-Y. Joo and M.D. Ilić. A tutorial on decentralized economic dispatch including demand resources in power systems. *IEEE Transactions on Education*, 2016. submitted.

[2.118] Y. Weng, M. Ilić, Q. Li, and R. Negi. Distributed algorithms for convexified bad data and topology error detection and identification problems. *International Journal of Electrical Power and Energy Systems*, 2016.

[2.119] J. Y. Joo and M. D. Ilić. An information exchange framework utilizing smart buildings for efficient microgrid operation. *Proceedings of the IEEE*, 104(4):858–864, April 2016.

[2.120] S. Baros and M. D. Ilić. Distributed torque control of deloaded wind DFIGs for wind farm power output regulation. *IEEE Transactions on Power Systems*, PP(99):1–1, 2017.

[2.121] H. Sun, Q. Guo, M. D. Ilić, Q. Wu, K. Sun, and P. Du. Guest editorial. *IET Generation, Transmission Distribution*, 11(15):3655–3656, 2017.

[2.122] M. D. Ilić and R. Jaddivada. Multi-layered interactive energy space modeling for near-optimal electrification of terrestrial, shipboard and aircraft systems. *Annual Reviews in Control*, 2018.

[2.123] A.R. Millner, C. Smith, R. Jaddivada, and M. D. Ilić. Component standards for stable microgrids. *IEEE Transactions on Power Systems*, 2018. (accepted, to appear).

[2.124] Y. Weng, R. Negi, and M. D. Ilić. Probabilistic joint state estimation for operational planning. *IEEE Transactions on Smart Grid*, 10(1):601–612, Jan 2019.

[2.125] S. Baros and M. D. Ilić. A consensus approach to real-time distributed control of energy storage systems in wind farms. *IEEE Transactions on Smart Grid*, 10(1):613–625, Jan 2019.

[2.126] A. R. Millner, C. L. Smith, R. Jaddivada, and M. D. Ilić. Component standards for stable microgrids. *IEEE Transactions on Power Systems*, 34(2):852–863, March 2019.

[2.127] M. D. Ilić and R. Jaddivada. Unified value-based feedback, optimization and risk management in complex electric energy systems. *Optimization and Engineering*, 21:427–483, Feb. 2020.

[2.128] M. D. Ilić, R. Jaddivada, and M. Korpas. Interactive protocols for distributed energy resource management systems (DERMS). *IET Generation, Transmission & Distribution*, 14(11):2065–2081, 2020.

[2.129] Carvalho, P. M., Peres, J. D., Ferreira, L. A., Ilić, M. D., Lauer, M., & Jaddivada, R. Incentive-based load shifting dynamics and aggregators response predictability. *Electric Power Systems Research*,189, 106744,(2020).

[2.130] Marija Ilić, Toward Autonomous Sustainable Electric Energy Systems: The Key Role of Data-Enabled Control and Computing/ML/AI Special Issue on Digital Turn – Memory Studies, Guest editor Nevena Daković, pp. 81-93, The IPSI Transactions on Internet Research, http://tir.ipsitransactions.org/, July 2021, Volume 17, Number 2, ISSN 1820 - 4503.

Proceedings of Refereed Conferences

[3.1] M. Rakic and M.D. Ilić. Jedno resenje sistema upravljanja bilateralnim manipulatorom (One solution for the control of a bilateral manipulator). In *XX Yugoslavian Conference for Electronics, Telecommunication, Automation and Nuclear Technology, Opatija, Yugoslavia*, June 1976.

[3.2] M.D. Ilić. Visekriterijumski pristup problemu optimalne eksploatacije elektroenergetskih sistema (Multicriteria approach to optimal operation of power systems). In *XXI Yugoslavian Conference for Electronics, Automation, Telecommunication and Nuclear Technology, Banja Luka, Yugoslavia*, June 1977.

[3.3] N. Narasimhamurthi and M. Ilić-Spong. A proof of the localized response of large interconnected power system in steady state. In *Proceedings of the Allerton Conference, Monticello, IL*, pages 997–1002, October 1980.

[3.4] M. Ilić-Spong, B.L. Jiang, and J. Zaborszky. An exact non-linear Y-Delta transformation for the S-E presentation of electric power systems. In *Proceedings of the Allerton Conference, Monticello, IL*, pages 786–795, October 1981.

[3.5] M. Ilić-Spong, Mark Spong, and Robert Fischl. A no-gain theorem for steady state electric power systems with losses. In *Proceedings of the Large Scale Systems Symposium, Norfolk Beach, VA*, 1982.

[3.6] M. Ilić-Spong and J. Zaborszky. A different approach to load flow. *IEEE Power Engineering Review*, PER-2(1):31–31, Jan 1982.

[3.7] M. Ilić-Spong and R. Fischl. Steady state electric network theorems for power systems. In *Proceedings of the International Symposium on Circuits and Systems, Newport Beach, CA*, pages 1180–1183, 1983.

[3.8] M. Ilić-Spong and M. Varghese. On a reactive power fault modeling in large-scale electric power systems. In *Proceedings of the 21st Annual Allerton Conference on Communications, Control and Computing, Urbana, IL*, pages 935–944, October 1983.

[3.9] M. Ilić-Spong. A complex power-complex voltage S-E graph for electric power systems studies. In *Proceedings of the Fifth International Symposium on Network Theory, Sarajevo, Yugoslavia*, pages 189–194, September 1984.

[3.10] M. Ilić-Spong. An electric power adjoint network for reactive power voltage studies. In *Proceedings of the IEEE International Conference on Circuits and Systems, Montreal, Canada*, pages 368–371, May 1984.

[3.11] M. Ilić-Spong and R.J. Thomas. A dynamical model for electric power systems which includes excitation and load effects. In *Proceedings of the Conference on Information Sciences and Systems, Princeton, NJ*, pages 624–627, March 1984.

[3.12] M. Ilić-Spong and J. Thorp. Conditions for localized response in decoupled voltage-var networks. In *Proceedings of the Power System Computer Control Conference, Helsinki, Finland*, pages 664–670, 1984.

[3.13] J. S. Thorp, M. Ilić-Spong, and M. Varghese. Optimal secondary voltage-var control using pilot point information structure. In *The 23rd IEEE Conference on Decision and Control*, pages 462–466, Dec 1984.

[3.14] J.S. Thorp, M. Ilić-Spong, and D. Schultz. Existence and uniqueness of a solution to the reactive power problem for an electric power network. In *Proceedings of the IEEE International Conference on Circuits and Systems, Montreal, Canada*, pages 372–376, May 1984.

[3.15] Ilić-Spong and D. Schulz. Development of a new bound on error in the solution to the decoupled reactive power-voltage Q-V load flow. In *Proceedings of the IEEE International Conference on Circuits and Systems, Kyoto, Japan*, pages 1245–1248, June 1985.

[3.16] M. Ilić-Spong. An approach to designing controllers of doubly salient electric machines. In *1985 American Control Conference*, pages 563–565, June 1985.

[3.17] M. Ilić-Spong and T. Miller. Non-linear control of switched reluctance motor drives which produces a desired torque. In *Proceedings of the 16th IEEE Power Electronics Specialists Conference, Toulouse, France*, pages 42–48, June 1985. best paper in the control area.

[3.18] M. Ilić-Spong, T. J. E. Miller, S. R. MacMinn, and J. S. Thorp. Instantaneous torque control of electric motor drives. In *1985 IEEE Power Electronics Specialists Conference*, pages 42–48, June 1985.

[3.19] R. Marino and M. Ilić-Spong. Stabilization and voltage regulation of electric power systems with (P,Q) load buses preserved. In *1985 24th IEEE Conference on Decision and Control*, pages 812–817, Dec 1985.

[3.20] J. Christensen and M. Ilić-Spong. Voltage control using an L_2-norm pilot point selection. In *Proceedings of the North American Power Symposium, Ithaca, NY*, October 1986.

[3.21] M. Crow, M. Ilić-Spong, and M.A. Pai. Dynamic simulation of large electric power systems utilizing parallel processing. In *Proceedings of the North American Power Symposium, Ithaca, NY*, pages 260–269, October 1986.

[3.22] F. Dobraca and M. Ilić-Spong. A novel approach to the protection problem. In *Proceedings of the North American Power Symposium, Ithaca, NY*, pages 93–106, October 1986.

[3.23] M. Ilić-Spong and F. K. Mak. Nonlinear torque control of electric motor drives: Part II. In *1986 17th Annual IEEE Power Electronics Specialists Conference*, pages 465–475, June 1986.

[3.24] M. Ilić-Spong and F. K. Mak. Torque control of switched reluctance drives with the saturation included. In *Proceedings of the IEEE Power Electronics Specialists Conference, Vancouver, BC*, pages 465–475, June 1986.

[3.25] M. Ilić-Spong, R. Marino, S. Peresada, and D.G. Taylor. Nonlinear control of switched reluctance motors in robotics applications. In *Proceedings of Conference on Applied Motion Control, Minneapolis, MN*, pages 129–136, June 1986.

[3.26] M. Ilić-Spong and J. Medanic. Modeling and control of slow voltage dynamics in electric power systems. In *Proceedings of the IFAC Symposium on Large Scale Systems, Lausanne, Switzerland*, August 1986.

[3.27] M. Ilić-Spong and J. Medanic. Strategies for real-time voltage/var control strategies. In *Proceedings of the 2nd IEE Conference on Monitoring, Communications and Control of Power Systems, London, England*, 1986.

[3.28] M. Ilić-Spong and A. Phadke. Redistribution of reactive power flow in contingency studies. *IEEE Power Engineering Review*, PER-6(8):54–54, Aug 1986.

[3.29] J. H. Lang, G. C. Verghese, and M. Ilić-Spong. Opportunities in estimation and control of electrical machines. In *1986 25th IEEE Conference on Decision and Control*, pages 379–387, Dec 1986.

[3.30] D. G. Taylor, M. Ilić-Spong, R. Marino, and S. Peresada. A feedback linearizing control for direct-drive robots with switched reluctance motors. In *1986 25th IEEE Conference on Decision and Control*, pages 388–396, Dec 1986.

[3.31] D.G. Taylor, M. Ilić-Spong, and S. Peresada. Nonlinear composite control of switched reluctance motors. In *Proceedings of the 12th IEEE Conference on Industrial Electronics, Milwaukee, WI*, pages 739–749, October 1986.

[3.32] G. C. Verghese, M. Ilić-Spong, and J. H. Lang. Modeling and control challenges in power electronics. In *1986 25th IEEE Conference on Decision and Control*, pages 39–45, Dec 1986.

[3.33] M.L. Crow, M. Ilić, and M.A. Pai. Waveform relaxation methods for solving differential-algebraic equations and their applications to power systems simulations. In *SIAM Meeting, Denver, CO*, October 1987.

[3.34] M. Ilić. Advanced control of electric drive systems. In *Proceedings of the American Power Conference, Chicago, IL*, pages 774–779, 1987. invited.

[3.35] M. Ilić and F. Dobraca. A new algorithm for digital protection of series compensated lines. In *Proceedings of the Conference on Computer Relaying -Future Directions and Impact, Blacksburg*, October 1987.

[3.36] M. Ilić and F. Mak. Mid-range voltage dynamics modeling with the load controls present. In *26th IEEE Conference on Decision and Control*, volume 26, pages 45–52, Dec 1987.

[3.37] M. Ilić and A. Stankovic. Feasibility problems in transferring large reactive power over the large distances. In *26th IEEE Conference on Decision and Control*, volume 26, pages 399–407, Dec 1987.

[3.38] M. Ilić-Spong, J. Christensen, and K. L. Eichorn. Secondary voltage control using pilot point information. In *Proceedings of the IEEE Power Industry Computer Applications Conference*, volume 1, pages 128–135, May 1987.

[3.39] J. Medanic, M. Ilić-Spong, and J. Christensen. Discrete models of slow voltage dynamics for under load tap-changing transformer coordination. *IEEE Power Engineering Review*, PER-7(11):30–30, Nov 1987.

[3.40] D. Taylor and M. Ilić. Linearization and control of switched reluctance motors. In *Proceedings of the 16th Annual Symposium on the Incremental Motion Control Systems and Devices, Urbana, IL*, pages 175–182, June 1987.

[3.41] J. Zaborszky, M. Ilić, and G. Huang. Inherently adaptive selective protection based on the nested protection unit principle and hypothesis testing. In *Proceedings of the Conference on Computer Relaying -Future Direction and Impact, Blacksburg, VA*, oct 1987.

[3.42] J. Zaborszky, M. Ilić-Spong, G. Huang, and F. Dobraca. Computer control of the large power system during faults for inherently adaptive selective protection. *IEEE Power Engineering Review*, PER-7(5):54–55, May 1987.

[3.43] M. L. Crow and M. Ilić. Parallel algorithms for large scale power system dynamic simulation. In *1988 American Control Conference*, pages 1795–1798, June 1988.

[3.44] M.L. Crow and M. Ilić. Effects of system decomposition and waveform relaxation windowing on the efficiency of large scale power systems simulation. In *Proceedings of the 12th IMACS World Congress on Scientific Computation, Paris, France*, July 1988.

[3.45] M. Ilić. New approaches to voltage and reactive power monitoring and control. In *Proceedings of a Special NSF/EPRI/Engineering Foundation Sponsored Workshop on Voltage Problems, Potosi, MO*, pages 8.1–8.27, September 1988.

[3.46] M. Ilić, S. Laeb, and K. Liebezeit. Exact nonlinear analysis of switched mode power converters. In *Power Electronics Specialists Conference, 1988. PESC '88 Record., 19th Annual IEEE*, volume 2, pages 977–986, April 1988.

[3.47] B. Perunicic, M. Ilić, and A. Stankovic. Short time stabilization of power systems via line switching. In *1988., IEEE International Symposium on Circuits and Systems*, volume 1, pages 917–921, June 1988.

[3.48] D.G. Taylor, M.J. Wooley, and M. Ilić. Implementation of linearizing and decoupling feedback transformation for switched reluctance motors. In *Proceedings of the 17th Incremental Motion Control Conference, Urbana, IL*, pages 173–184, June 1988.

[3.49] M. L. Crow and M. Ilić. The waveform relaxation algorithm for systems of differential/algebraic equations with power system applications. In *1989 American Control Conference*, pages 1771–1776, June 1989.

[3.50] M. L. Crow, M. D. Ilić, and J. K. White. Convergence properties of the waveform relaxation method as applied to electric power systems. In *IEEE International Symposium on Circuits and Systems*, volume 3, pages 1863–1866, May 1989.

[3.51] M. Ilić and F. Mak. Conditions for separation of electromechanical and electromagnetic dynamics in electric power systems. In *Proceedings of the International Symposium on Circuits and Systems, Seattle, WA*, pages 1246–1251, May 1989.

[3.52] M. Ilić and F. K. Mak. Mid-range voltage dynamics in electrical power systems. In *IEEE International Symposium on Circuits and Systems*, volume 3, pages 1988–1991, May 1989.

[3.53] M. Ilić and F. K. Mak. A new class of fast nonlinear voltage controllers and their impact on improved transmission capacity. In *1989 American Control Conference*, pages 1246–1251, June 1989.

[3.54] M. Ilić and F. K. Mak. A two-level control coordination in interconnected power systems. In *Proceedings of the 28th IEEE Conference on Decision and Control*, volume 1, pages 345–348, Dec 1989.

[3.55] M. L. Crow and M. Ilić. The parallel implementation of the waveform relaxation method for the simulation of structure-preserved power systems. In *IEEE International Symposium on Circuits and Systems*, volume 2, pages 1285–1288, May 1990.

[3.56] M. L. Crow and M. D. Ilić. The waveform relaxation method for systems of differential/algebraic equations. In *29th IEEE Conference on Decision and Control*, volume 2, pages 453–458, Dec 1990.

[3.57] M. Ilić and F. K. Mak. Voltage dynamics of electric power systems in their closed loop operation. In *IEEE International Symposium on Circuits and Systems*, volume 3, pages 1822–1826, May 1990.

[3.58] M. D. Ilić. Nonlinear monotone networks and their role in the electric power systems. In *IEEE International Symposium on Circuits and Systems*, volume 1, pages 148–151, May 1990.

[3.59] F.K. Mak and M. Ilić. Towards most effective control of reactive power reserves in electric machines. In *Proceedings of the 10th Power Systems Computation Conference, Graz, Austria*, pages 359–367, August 1990.

[3.60] J. L. Wyatt and M. Ilić. Time-domain reactive power concepts for nonlinear, nonsinusoidal or nonperiodic networks. In *IEEE International Symposium on Circuits and Systems*, volume 1, pages 387–390, May 1990.

[3.61] D. Bertagnolli and et al. M. Ilić. Method and test results for the MIT approach to steady state voltage monitoring and corrective actions. In *Proceedings of the International Workshop on Bulk Power Systems Voltage Phenomena: Voltage Stability and Security, Madison, WI*, pages 241–252, August 1991.

[3.62] M. Ilić. Short-term energy management in a competitive utility environment. In *Proceedings of the NSF Workshop on the Impact of a Less Regulated Utility Environment on Power System Control and Security, Madison, WI*, pages 15–37, April 1991.

[3.63] M. Ilić. A survey of the present state-of-the-art voltage control with emphasis on potential role of FACTS devices. In *Proceedings of the International Workshop on Bulk Power Systems Voltage Phenomena: Voltage Stability and Security, Madison, WI*, pages 379–393, August 1991.

[3.64] M. Ilić and C.M. Jayko. Modeling, analysis and simulation of canal unit #1 tripping event on the COM electric system. In *Proceedings of the Electric Power Research Institute Conference on Power Plant and Power System Training Simulators and Modeling, Fort Lauderdale, FL*, March 1991.

[3.65] M. Ilić and A. Stankovic. Voltage problems on transmission networked subject to unusual power flow patterns. *IEEE Power Engineering Review*, 11(2):71–, February 1991.

[3.66] K. K. Lim and M. D. Ilić. Control coordination on the distribution power network. In *1991., IEEE International Sympoisum on Circuits and Systems*, volume 2, pages 1232–1235, Jun 1991.

[3.67] Kok-Kee Lim and M. Ilić. Control of underload tap changing transformers. In *Proceedings of the American Control Conference, Boston, MA*, 1991.

[3.68] N. Sabanovic-Behlilovic, B. Perunicic, A. Sabanovic, and M. Ilić. Variable structure control in active power filter control. In *Proceedings of the Workshop on Variable Structure Control of Power Conversion Systems, Reno, NV*, pages 109–113, June 1991.

[3.69] A. Stankovic, M. Ilić, and D. Maratukulam. Recent results in secondary voltage control of power systems. *IEEE Power Engineering Review*, 11(2):49–, February 1991.

[3.70] J. W. Chapman and M. D. Ilić. Damping multimachine power system oscillations with feedback linearizing excitation control. In *1992 American Control Conference*, pages 1734–1735, June 1992.

[3.71] J. W. Chapman and M. D. Ilić. Some robustness results for feedback linearizing control of generator excitation. In *[1992] Proceedings of the 31st IEEE Conference on Decision and Control*, volume 1, pages 1123–1128, 1992.

[3.72] J.W. Chapman, M. Ilić, and et al. C.A. King. Stability of a multi-machine power system via decentralized feedback linearizing excitation control. In *IEEE Power Engineering Society Meeting, Seattle, WA*, July 1992.

[3.73] N. H. Doerry, J. V. Amy, M. Tolikas, J. L. Kirtley, and M. D. Ilić. Object oriented approach to the simulation of shipboard electric power systems. In *1992 American Control Conference*, pages 1660–1664, June 1992.

[3.74] M. Ilić. Network theoretic conditions for existence and uniqueness of steady state solutions to electric power circuits. In *[Proceedings] 1992 IEEE International Symposium on Circuits and Systems*, volume 6, pages 2821–2828, May 1992.

[3.75] X. Liu, M. Ilić, M. Athans, C. Vila, and B. Heilbronn. A new concept of an aggregate model for tertiary control coordination of regional voltages. In *[1992] Proceedings of the 31st IEEE Conference on Decision and Control*, volume 3, pages 2934–2940, 1992.

[3.76] F. Nishimura, R. D. Tabors, M. D. Ilić, and J. R. Lacalle-Melero. Benefit optimization of centralized and decentralized power systems in a multi-utility environment. In *IEEE Power Engineering Society Meeting*, July 1992.

[3.77] M. Tolikas, L. Trajkovic, and M. D. Ilić. Homotopy methods for solving decoupled power flow equations. In *[Proceedings] 1992 IEEE International Symposium on Circuits and Systems*, volume 6, pages 2833–2839, May 1992.

[3.78] B. Eidson and M. Ilić. High resolution techniques to estimate the magnitude, phase and offset frequency of phasors in the presence of noise and interference. In *Proceedings of the Precise Measurements in Power Systems Conference, Washington, DC*, October 1993.

[3.79] M. Hasler, C. Wang, M. Ilić, and A. Zobian. Computation of static stability margins in power systems using monotonicity. In *1993 IEEE International Symposium on Circuits and Systems*, volume 4, pages 2196–2199, May 1993.

[3.80] M. Ilić, S. X. Liu, and C. Vialas. A new concept for a tertiary coordination of secondary voltage control on the french power network. In *Proceedings of the 11th Power Systems Computation Conference, Avignon, France*, August 1993.

[3.81] M. Ilić and S.X. Liu. A simple structural approach to modeling and analysis of the inter-area dynamics of the large electric power systems: Part I– Linearized models of frequency dynamics. In *Proceedings of the 1993 North American Power Symposium, Washington, DC*, pages 560–569, October 1993. best student paper award.

[3.82] M. Ilić and S.X. Liu. A simple structural approach to modeling and analysis of the inter-area dynamics of the large electric power systems: Part II– Nonlinear models of frequency and voltage dynamics. In *Proceedings of the North American Power Symposium*, pages 570–578, October 1993. best student paper award.

[3.83] M. D. Ilić, Xiaojun Liu, and J. W. Chapman. Control of the inter-area dynamics using FACTS technologies in large electric power systems. In *Proceedings of 32nd IEEE Conference on Decision and Control*, volume 3, pages 2370–2376, Dec 1993.

[3.84] C.A. King, J.W. Chapman, and M. Ilić. Feedback linearizing excitation control on a full-scale power system model. In *IEEE Power Engineering Society Meeting, Washington, DC*, July 1993.

[3.85] M. Yehia, R. Chedid, Z. Jaber, M. Ilić, and A. Zobian. An improved dynamically allocated data structure for power system problems. In *Proceedings of the IAESTED International Conference on Reliability, Quality Control and Risk Assessment, Cambridge, MA*, October 1993.

[3.86] J. W. Chapman and M. D. Ilić. A new model formulation for power system voltage control during large disturbances. In *Proceedings of 1994 33rd IEEE Conference on Decision and Control*, volume 4, pages 4049–4054, Dec 1994.

[3.87] J.W. Chapman and M. Ilić. Power system modeling for coupled voltage/power dynamics. In *Proceedings of the Symposium on Bulk Power System Voltage Phenomena III, Davos, Switzerland*, pages 271–278, August 1994.

[3.88] K. Chin, S. J. Huang, M. Ilić, and A. Zobian. Nonlinear tracking control of small electrical machines. In *Proceedings of 1994 33rd IEEE Conference on Decision and Control*, volume 1, pages 211–212, Dec 1994.

[3.89] M. Ilić. Performance-based value of transmission services for competitive energy management. In *Proceedings of the 26th North American Power Symposium, Manhattan, KS*, 1994.

[3.90] M. Ilić, S.X. Liu, and C. Vialas. Some optimality notions of voltage profile for the steady state operation of the electric power systems. In *Proceedings of the Symposium on Bulk Power System Voltage Phenomena III, Davos, Switzerland*, pages 243–249, August 1994.

[3.91] M. Ilić, S. Masciangelo, and E. Pianigiani. Ground plane obstacle detection from optical flow anomalies: a robust and efficient implementation. In *Intelligent Vehicles '94 Symposium, Proceedings of the*, pages 333–338, Oct 1994.

[3.92] E. Allen, N. LaWhite, Y.T. Yoon, J.W. Chapman, and M. Ilić. Interactive object-oriented simulation of interconnected power systems using SIMULINK. In *Proceedings of the North American Electric Power Symposium, Bozeman, MT*, pages 235–243, October 1995.

[3.93] E. H. Allen, J. W. Chapman, and M. D. Ilić. Effects of torsional dynamics on nonlinear generator control. 1. In *Proceedings of 1995 34th IEEE Conference on Decision and Control*, volume 4, pages 3887–3894, Dec 1995.

[3.94] E. H. Allen, J. W. Chapman, and M. D. Ilić. Effects of torsional dynamics on nonlinear generator control. II. In *Proceedings of 1995 34th IEEE Conference on Decision and Control*, volume 4, pages 3479–3485, Dec 1995.

[3.95] E. H. Allen, J. W. Chapman, and M. D. Ilić. Eigenvalue analysis of the stabilizing effects of feedback linearizing control on subsynchronous resonance. In *Proceedings of International Conference on Control Applications*, pages 395–402, Sep 1995.

[3.96] B. Eidson and M. Ilić. AGC: Technical enhancements, costs, and responses to market-driven demand. In *Proceedings of the American Power Conference, Chicago, IL*, pages 156–160, April 1995.

[3.97] B. D. Eidson and M. D. Ilić. Advanced generation control with economic dispatch. In *Proceedings of 1995 34th IEEE Conference on Decision and Control*, volume 4, pages 3450–3458, Dec 1995.

[3.98] M. Ilić. A brief survey of present system-wide functions and their role in distributed energy markets: Limits to distribution. In *Proceedings of the American Power Conference, Chicago, IL*, April 1995.

[3.99] N.D. Rao and M. Ilić. Pricing frequency control in a deregulated electricity market: An application of the interaction balance method. In *Proceedings of the North American Electric Power Symposium, Bozeman, MT*, pages 63–73, October 1995.

[3.100] A. Zobian and M. Ilić. Allocation of power imbalance caused by economic transactions. In *Proceedings of the North American Electric Power Symposium, Bozeman, MT*, pages 52–62, October 1995.

[3.101] A. Zobian and M. Ilić. A simple solution to the loop flow problem in pricing transmission services. In *Proceedings of the American Power Conference, Chicago, IL*, April 1995.

[3.102] A. Zobian and M. Ilić. A steady-state voltage monitoring and control algorithm using localized least squares minimization of load voltage deviation. In *IEEE Power Engineering Society Meeting, Portland, OR*, July 1995.

[3.103] J. Cardell and M. Ilić. Modeling and stability analysis for distributed generation systems. In *Proceedings of the North American Power Symposium, MIT, Cambridge, MA*, pages 239–347, November 1996.

[3.104] M. Ilić. A possible framework for implementing energy transactions into real-time system operation and pricing for system services. In *Proceedings of the EPRI Conference on Innovative Approaches to Electricity Pricing: Managing the Transition to Market-Based Pricing, La Jolla, CA*, March 1996. invited.

[3.105] M. Ilić, F.D. Galiana, L. Fink, A. Bose, P. Mallet, and H. Othman. Transmission capacity in power networks. In *Proceedings of the Power Systems Computation Conference, Dresden, Germany*, pages 21– May, August 1996. invited survey.

[3.106] M. Ilić and F.C. Graves. Optimal use of ancillary generation under open access and its possible implementation. In *Proceedings of the Power Systems Computer Conference, Dresden*, August 1996.

[3.107] M. D. Ilić and Chien-Ning Yu. Minimal system regulation and its value in a changing industry. In *Proceeding of the 1996 IEEE International Conference on Control Applications IEEE International Conference on Control Applications held together with IEEE International Symposium on Intelligent Control*, pages 442–449, Sep 1996.

[3.108] P. Skantze and M. Ilić. Price-driven model for system control under open access: Short-term gaming for profit vs. system regulation. In *Proceedings of the North American Power Symposium, MIT, Cambridge, MA*, pages 89–96, November 1996.

[3.109] E.H. Allen and M. Ilić. Stochastic unit commitment in a deregulated utility industry. In *Proceedings of the North American Power Symposium, Laramie, WY*, pages 105–112, October 1997.

[3.110] S. Banales and M. Ilić. On the role and value of voltage support in a deregulated power industry. In *Proceedings of the North American Power Symposium, Laramie, WY*, pages 471–478, October 1997.

[3.111] J.W. Chapman, J.M. Fini, and M. Ilić. A time-scale decomposition for secure control with limited input magnitude. In *Proceedings of the IEEE Automatic Control Conference, Albuquerque, NM*, June 1997.

[3.112] M. Ilić. Public comments to the task force on electric system reliability. In *Secretary of Energy Advisory Board June*, 1997.

[3.113] M. Ilić and L. Hyman. Incentives for transmission investments. In *Proceedings of the EPRI Workshop on Power Delivery in the 21st Century, LaJolla, CA*, November 1997.

[3.114] M. Ilić, P. Skantze, and C.N. Yu. Market-based frequency regulation: Can it be done, why and how? In *Proceedings of the American Power Conference, Chicago, IL.*, April 1997.

[3.115] B. S. Lecinq and M. D. Ilić. Peak-load pricing for electric power transmission. In *Proceedings of the Thirtieth Hawaii International Conference on System Sciences*, volume 5, pages 624–633, Jan 1997.

[3.116] P. Lerner and M. Ilić. On the value of transmission systems: Incentives for investment under open access. In *Proceedings of the 18th Annual North American Conference of the International Association of Energy Economists, San Francisco, CA*, pages 330–339, 1997.

[3.117] Y. B. Yoon, J.B. Choo, Y.T. Yoon, and M. Ilić. Potential use of FACTS on the Korea Electric Power Co. system. In *Proceedings of the EPRI Workshop on Power Delivery in the 21st Century LaJolla, CA*, November 1997.

[3.118] Z. Younes and M. Ilić. Transmission system constraints in non-perfect electricity markets. In *Proceedings of the 18th Annual North American Conference of the International Association of Energy Economists, San Francisco, CA*, pages 256–265, September 1997.

[3.119] S. Connors and M. Ilić. Making electric power deregulation work. In *Op/Ed, Boston Globe, December 13*, page D7, 1998.

[3.120] F.D. Galiana, P. Cuervo Franco, and M. Ilić. Pool generation dispatch with independent transmission projects. In *Proceedings of the 21st Annual International Conference of the International Association for Energy Economists, Quebec City, Canada*, pages 105–114, May 1998.

[3.121] M. Ilić, J-P. Leotard, C. Rochlin, and S. Stoft. On the objectives of transmission pricing. In *Proceedings of the International Symposium on Bulk Power Systems Dynamics and Control-IV: Restructuring, Santorini, Greece*, August 1998.

[3.122] Z. Younes and M. Ilić. Generation strategies for gaming transmission constraints. will the deregulated electric power market be an oligopoly? In *Proceedings of the Thirty-First Hawaii International Conference on System Sciences*, volume 3, pages 112–121, 1998.

[3.123] M. Ilić. On the objectives of transmission pricing under open access. In *IEEE Power Engineering Society. 1999 Winter Meeting (Cat. No.99CH36233)*, volume 1, pages 392–393, Jan 1999.

[3.124] M. Ilić, P. Skantze, C. N. Yu, L. Fink, and J. Cardell. Power exchange for frequency control (PXFC). In *IEEE Power Engineering Society. 1999 Winter Meeting (Cat. No.99CH36233)*, volume 2, pages 809–819, Jan 1999.

[3.125] M. Ilić, P. Skantze, C-N. Yu, L.H. Fink, and J. Cardell. Power exchange for frequency control (PXFC). In *Proceedings of the IEEE Power Engineering Society Winter Meeting, New York, NY.*, February 1999.

[3.126] M. Ilić, T.Y. Yoon, and C.N. Yu. The role of reactive power/voltage support in creating market power. In *Informs 99, Cincinnati, OH*, May 1999.

[3.127] M. D. Ilić and Chien-Ning Yu. A possible framework for market-based voltage/reactive power control. In *IEEE Power Engineering Society. 1999 Winter Meeting (Cat. No.99CH36233)*, volume 2, pages 794–802, Jan 1999.

[3.128] J. P. Leotard and M. Ilić. On the objectives of transmission pricing under open access. In *IEEE Power Engineering Society. 1999 Winter Meeting (Cat. No.99CH36233)*, volume 1, pages 476–483, Jan 1999.

[3.129] K. A. Millis and M. D. Ilić. A new scattering matrix-based formulation for electric power systems. In *PowerTech Budapest 99. Abstract Records. (Cat. No.99EX376)*, pages 243–, Aug 1999.

[3.130] J.F. Prada and M.D. Ilić. Pricing reliability: A probabilistic approach. In *Proc. of the Large Engineering Systems Conference on Power Engineering (LESCOPE99) Halifax, Canada*, June 1999.

[3.131] P. Visudhiphan and M. D. Ilić. Dynamic games-based modeling of electricity markets. In *IEEE Power Engineering Society. 1999 Winter Meeting (Cat. No.99CH36233)*, volume 1, pages 274–281, Jan 1999.

[3.132] Chien-Ning Yu and M. D. Ilić. Congestion clusters-based markets for transmission management. In *IEEE Power Engineering Society. 1999 Winter Meeting (Cat. No.99CH36233)*, volume 2, pages 821–832, Jan 1999.

[3.133] J. Zaborszky and M. Ilić. General structure of the regulated, deregulated and other generation dispatch systems. In *PowerTech Budapest 99. Abstract Records. (Cat. No.99EX376)*, page 2, Aug 1999.

[3.134] M. Jelinek and M. Ilić. A strategic framework for electric energy: Technology and institutional factors and IT in a deregulated environment. In *Proceedings of the NSF/DOE/EPRI sponsored Workshop on Research Needs in Complex Interactive Networks, Arlington, VA*, December 2000. www NSF/ENG/ECS.

[3.135] P. Skantze, M. Ilić, and J. Chapman. Stochastic modeling of electric power prices in a multi-market environment. In *2000 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.00CH37077)*, volume 2, pages 1109–1114, 2000.

[3.136] P. Visudhiphan and M. D. Ilić. Dependence of generation market power on the demand/supply ratio: analysis and modeling. In *2000 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.00CH37077)*, volume 2, pages 1115–1122, 2000.

[3.137] Y. Yoon, K. Collison, and M. Ilić. Implementation of cluster-based congestion management systems proceedings. In *Proceedings of the ICSOP, Ghana*, July 2000.

[3.138] Y. Yoon, S. Raikar, and M. Ilić. Congestion management for large electric power systems. In *Proceedings, 6th International Conference on Probabilistic Methods Applied to Power Systems, Madeira, Portugal, paper number 114*, September 2000.

[3.139] Y.T. Yoon, K. Collison, J.R. Arce, and M.D. Ilić. Congestion management systems methods: Comparison on 118 bus system. In *Proceedings of the 32nd Annual North American Power Symposium, Waterloo, Canada*, July 2000.

[3.140] C. N. Yu and M. D. Ilić. An algorithm for implementing transmission rights in a competitive power industry. In *2000 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.00CH37077)*, volume 3, pages 1708–1714, Jan 2000.

[3.141] J. R. Arce, M. D. Ilić, and F. F. Garces. Managing short-term reliability related risks. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 1, pages 516–522, July 2001.

[3.142] J. R. Arce, M. D. Ilić, and F. F. Garces. Two new methods to assess short-term transmission reliability. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 1, pages 503–509, July 2001.

[3.143] J. W. Black and M. Ilić. Survey of technologies and cost estimates for residential electricity services. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 1, pages 255–260, July 2001.

[3.144] E. Fumagalli, J. W. Black, M. Ilić, and I. Vogelsang. A reliability insurance scheme for the electricity distribution grid. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 1, pages 261–266, July 2001.

[3.145] O.N. Gozum and M.D. Ilić. Decision tools for electricity transmission service and pricing. In *Proceedings of the IFAC Symposium on Modeling and Control of Economic Systems, Klagenfurt, Austria*, September 2001.

[3.146] M. Ilić. Change of paradigms in complexity and interdependencies of infrastructures: The case for flexible new protocols. In *Proceedings of the OSTP/NSF White House Meeting*, June 2001.

[3.147] M. Ilić. The information technology (IT) role in future energy generation, distribution and consumption. In *2001 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.01CH37194)*, volume 1, pages 196–198, Jan 2001.

[3.148] M. Ilić, M. Calovic, and N. Mijuskovic. Energy infrastructure in Yugoslavia: The past and challenges ahead. In *Proceedings of the 1st International Conference on Environmental Recovery in Yugoslavia, Belgrade, Yugoslavia*, September 2001.

[3.149] M. Ilić, M. Calovic, N. Mijuskovic, R. Golob, A. Gubina, F. Gubina, and P. Skantze. A model-based approach to energy economics in the balkans: Effects of political and deregulation processes. In *1st Balkan Power Conference, Slovenia.*, September 2001.

[3.150] M. D. Ilić, J. R. Arce, and Yong Yoon. Proposal with proper valuation of the reliability related risk taking. In *2001 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.01CH37194)*, volume 1, pages 365–366, Jan 2001.

[3.151] S. Raikar and M. Ilić. Assessment of transmission congestion for major electricity markets in the US. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 2, pages 1152–1156, July 2001.

[3.152] S. Raikar and M. Ilić. Interruptible physical transmission contracts for congestion management. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 3, pages 1639–1646, July 2001.

[3.153] P. Skantze and M. Ilić. Investment dynamics and long term price trends in competitive electricity markets. In *Proceedings of the IFAC Symposium on Modeling and Control of Economic Systems, Klagenfurt, Austria*, September 2001.

[3.154] P. Visudhiphan and M. Ilić. A multi-agent approach to modeling electricity spot markets. In *Proceedings of the IFAC Symposium on Modeling and Control of Economic Systems, Austria*, September 2001.

[3.155] P. Visudhiphan, P. Skantze, and M. Ilić. Dynamics of new investments in competitive electricity markets and its impact on system reliability. In *Proceedings of the Conference on Methods to Secure Peak Load Capacity on Deregulated Electricity Markets, Stockholm, Sweden*, June 2001.

[3.156] Y. T. Yoon, K. K. Collison, and M. D. Ilić. Efficient implementation of inter-regional transactions. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 3, pages 1621–1629, July 2001.

[3.157] Y. T. Yoon and M. D. Ilić. Independent transmission company (ITC) and markets for transmission. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 1, pages 229–234, July 2001.

[3.158] Y. T. Yoon and M. D. Ilić. Price-cap regulation for transmission: objectives and tariffs. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 2, pages 1052–1057, July 2001.

[3.159] Y. T. Yoon and M. D. Ilić. Secondary market for transmission and the supporting infrastructures. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 1, pages 241–248, July 2001.

[3.160] Yong Yoon, M. Ilić, K. Collison, and J. Arce. Practical implementation of congestion cluster pricing method. In *2001 Power Engineering Society Summer Meeting. Conference Proceedings (Cat. No.01CH37262)*, volume 3, pages 1630–1638, July 2001.

[3.161] J. Zaborszky and M. Ilić. Exploring the potential of the all DC (ADC) bulk power systems. In *Proceedings of the Bulk Power System Dynamics & Control V, Onomichi, Japan*, August 2001. plenary paper.

[3.162] J. R. Arce, F. F. Garces, and M. D. Ilić. Comparison of the ex-ante and ex-post methods for short-term reliability management. In *2002 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.02CH37309)*, volume 2, pages 779–786, 2002.

[3.163] J. W. Black and M. Ilić. Demand-based frequency control for distributed generation. In *IEEE Power Engineering Society Summer Meeting*, volume 1, pages 427–432, July 2002.

[3.164] A. Botterud, A. K. Bhattacharyya, and M. Ilić. Futures and spot prices—an analysis of the Scandinavian electricity market. In *Proc. 34th Annual North American Power Symposium (NAPS'02), Tempe, AZ*, October 2002.

[3.165] W.K. Gatterbauer and M. Ilić. Counterexamples to commonly held assumptions on unit commitment and market power assessment. In *Proceedings of North American Power Symposium, Tempe, Arizona.*, October 2002.

[3.166] M. Ilić. Model-based protocols for the changing electric power industry. In *Proceedings of the Power Systems Computation Conference, Seville, Spain*, June 2002.

[3.167] M. Ilić. A proposal for an inter-regional transmission organization (IRTO). In *2002 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.02CH37309)*, volume 1, page 54, 2002.

[3.168] M. Ilić, J. W. Black, and J. L. Watz. Potential benefits of implementing load control. In *2002 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.02CH37309)*, volume 1, pages 177–182, 2002.

[3.169] Black. J. and M. Ilić. Demand-based compensation for distributed generation. In *Proceedings of the Power Systems Conference on Distributed Generation, Clemson University, NC*, March 2002.

[3.170] P. Visudhiphan and M. Ilić. On the necessity of an agent-based approach to assessing market power in the electricity markets. In *Proceedings of the 10th International Symposium on Dynamic Games and Applications, St. Petersburg, Russia*, July 2002.

[3.171] P. Visudhiphan, M. D. Ilić, and M. Mladjan. On the complexity of market power assessment in the electricity spot markets. In *2002 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.02CH37309)*, volume 1, pages 440–446, 2002.

[3.172] P. Visudhiphan, J. Watz, and M. Ilić. Applications of autonomous agents for modeling electricity spot market price dynamics. In *Proceedings of the Power Systems Computation Conference, Spain*, June 2002.

[3.173] Y. T. Yoon and M. D. Ilić. A possible notion of short-term value-based reliability. In *2002 IEEE Power Engineering Society Winter Meeting. Conference Proceedings (Cat. No.02CH37309)*, volume 2, pages 772–778, 2002.

[3.174] A. Botterud, M. Ilić, and I. Wagensteen. Optimization of generation investments under uncertainty in restructuring power markets. In *12th ISAP 2003 Conference Proceedings, Lemnos, Greece.*, September 2003.

[3.175] M. Ilić. Transmission reliability and security under open access. In *2003 IEEE Power Engineering Society General Meeting (IEEE Cat. No.03CH37491)*, volume 3, pages 1406–1408, July 2003.

[3.176] M. Wagner, P Skantze, and M. Ilić. Hedging optimization algorithm for competitive electric power. In *12th ISAP 2003 Conference Proceedings, Lemnos, Greece.*, September 2003.

[3.177] J. Cardell and M. Ilić. Maintaining stability with distributed generation in a restructured industry. In *IEEE Power Engineering Society General Meeting, 2004.*, volume 2, pages 2142–2149, June 2004.

[3.178] E. Caruso, M. Dicorato, A. Minoia, and M. Ilić. The impact of physical bilateral agreements on the wholesale electricity price. In *Proc. of the Bulk Power systems Decision and Control VI, Cortina de Amprezzo, Italy.*, August 2004.

[3.179] D. Ernst, A. Minoia, and M. Ilić. Market dynamics driven by the decision-making of both power producers and transmission owners. In *IEEE Power Engineering Society General Meeting, 2004.*, volume 1, pages 255–260, June 2004.

[3.180] M. Ilić. Regulatory/market and engineering needs for enhancing performance of the U.S. electric power grid: Alternative architectures and methods for their implementation. In *8th World Multi-Conference on Systemics, Cybernetics and Informatics (SCI'2004), Orlando, FL*, July 2004. Invited session: Informational and control reliability challenges in modern power systems.

[3.181] M. Ilić. Toward a multi-layered architecture of large-scale complex systems: Reliable and efficient man-made infrastructures. In *Proceedings of the MIT/ESD Symposium, Cambridge, MA*, March 2004.

[3.182] M. Ilić. Transmission reliability and security under open access. In *IEEE Power Engineering Society General Meeting, 2004.*, volume 1, pages 403–405, June 2004.

[3.183] M. Ilić. Transmission system reliability and security under open access. In *Proceedings of the IEEE PES GM, Boulder, CO*, June 2004. invited panel.

[3.184] M. Ilić, M. Elizondo, M. Patnik, Z. Romo, and Z. Wu. Economies of scope and value of coordination in the evolving electric power industry. In *Proceedings of the CMU T&D Conference, Pittsburgh, PA.*, December 2004.

[3.185] M. Ilić and F. Wu. Research and applications on real power grids: Past successes and future opportunities. In *Proc. of the Bulk Power systems Decision and Control VI, deAmpezzo, Italy.*, August 2004.

[3.186] Z.Wu Patino Echeverri, D. and M. Ilić. Clean air and affordable electricity? In *Proceedings of the North American Power Symposium (NAPS), Univ of Idaho, Moscow, Idaho*, August 2004.

[3.187] H. Wang, M. Ilić, and I. Vogelsang. Multilayered unbundled delivery of electricity service to customers under normal conditions. In *IEEE Power Engineering Society General Meeting, 2004.*, volume 2, pages 2257–2265, June 2004.

[3.188] M. Ilić. Reconciling hierarchical control and open access in the changing electric power industry. In *Proceedings. 2005 IEEE Networking, Sensing and Control, 2005.*, pages 799–809, March 2005.

[3.189] Marija Ilić. Discussion of the paper by Michael Crew, reliability and service quality in network industries. In *Conference in Honor of Paul Kleindorfer: Recent Advances in Operations and Risk Management*, May 2005.

[3.190] M. Patnik and M. Ilić. Capacity expansion and investment as a function of electricity market structure: Part II - Transmission. In *2005 IEEE Russia Power Tech*, pages 1–7, June 2005.

[3.191] Zhiyong Wu and M. Ilić. Capacity expansion and investment as a function of electricity market structure: Part I - generation. In *2005 IEEE Russia Power Tech*, pages 1–8, June 2005.

[3.192] E. A. Blood, M. D. Ilić, J. Ilić, and B. H. Krogh. A Kalman filter approach to quasi-static state estimation in electric power systems. In *2006 38th North American Power Symposium*, pages 417–422, Sept 2006.

[3.193] Seth Blumsack, Lester B. Lave, and Marija Ilić. Assessing the tradeoffs between congestion and reliability in electric power networks. In *USAEE/IAEE 26th North American Conference, Ann Arbor MI.*, September 2006.

[3.194] M. A. Elizondo, M. D. Ilić, and P. E. Mercado. Determining the cost of dynamic control capacity for improving system efficiency. In *2006 IEEE Power Engineering Society General Meeting*, page 9, 2006.

[3.195] J. Ilić, L. Xie, and M. D. Ilić. Critical voltage monitoring using sensitivity and optimal information machine learning. In *2006 38th North American Power Symposium*, pages 531–535, Sept 2006.

[3.196] J. Ilić, L. Xie, and M. D. Ilić. Critical voltage monitoring using sensitivity and optimal information machine learning. In *North American Power Symposium (NAPS), University of Illinois, Carbondale, IL*, September 2006.

[3.197] M. Ilić and Le Xie. Overlapping decomposition of load flow Jacobian for static voltage stability indicator in interconnected power system. In *Electricity Conference, Carnegie Mellon Univ*, January 2006. http://www.ece.cmu.edu/electricityconference.

[3.198] M. D. Ilić. EN-TASK: Energy-temporal and structural kit. In *2006 38th North American Power Symposium*, pages 219–226, Sept 2006.

[3.199] M. D. Ilić, J. H. Lang, E. Litvinov, and X. Luo. The critical role of computationally robust AC optimal power flow in reliable and efficient reactive power/voltage dispatch. In *2006 IEEE PES Power Systems Conference and Exposition*, pages 689–698, Oct 2006.

[3.200] E. Minoia, D. Ernst, M. Dicorato, M. Trovato, and M. Ilić. Reference transmission network: a game theory approach. In *2006 IEEE Power Engineering Society General Meeting*, page 1, 2006.

[3.201] M. Prica and M. D. Ilić. Peak-load pricing based planning for distribution networks under change. In *2006 IEEE Power Engineering Society General Meeting*, page 6, 2006.

[3.202] A. A. Thatte and M. D. Ilić. An assessment of reactive power/voltage control devices in distribution networks. In *2006 IEEE Power Engineering Society General Meeting*, page 8, 2006.

[3.203] Z. Wu and M. Ilić. Toward the value-based generation investments and utilization: Stratum electricity market. In *2006 38th North American Power Symposium*, pages 89–98, Sept 2006.

[3.204] Z. Wu and M. Ilić. Toward the value-based generation investments and utilization: Stratum electricity market. In *2006 International Conference on Probabilistic Methods Applied to Power Systems*, pages 1–10, June 2006.

[3.205] L. Xie, J. Ilić, and M. D. Ilić. Towards grid modernization through enhanced communications and computing: Novel performance index and information structure for monitoring voltage problems. In *2006 38th North American Power Symposium*, pages 537–544, Sept 2006.

[3.206] Y. Zhang, M. D. Ilić, M. Prica, and O. Tonguz. Imbedding smart relays in large electric power networks: The scalability problem and a possible solution. In *2006 38th North American Power Symposium*, pages 457–464, Sept 2006.

[3.207] Yi Zhang, M. Prica, M. D. Ilić, and O. K. Tonguz. Toward smarter current relays for power grids. In *2006 IEEE Power Engineering Society General Meeting*, page 8, 2006.

[3.208] S. Blumsack, M. Ilić, and L. B. Lave. Separability and independence of congestion and reliability: Theory and simulations. In *2007 IEEE Power Engineering Society General Meeting*, pages 1–10, June 2007.

[3.209] M. Ilić. Engineering energy services of the future by means of dynamic energy control protocols (DECPs). In *2007 IEEE International Conference on Systems, Man and Cybernetics*, pages 35–43, Oct 2007.

[3.210] M. D. Ilić, J. H. Lang, and E. H. Allen. The role of numerical tools in maintaining reliability during economic transfers: An illustration using the NPCC equivalent system model. In *2007 iREP Symposium - Bulk Power System Dynamics and Control - VII. Revitalizing Operational Reliability*, pages 1–13, Aug 2007.

[3.211] M. D. Ilić, Y. Makarov, and D. Hawkins. Operations of electric power systems with high penetration of wind power: Risks and possible solutions. In *2007 IEEE Power Engineering Society General Meeting*, pages 1–4, June 2007.

[3.212] Marija Ilić. Engineering future energy systems as cyber-physical ecosystems. In *IEEE Systems, Man, and Cybernetics Conference (SMC 2007), Montreal, Canada.*, October 2007. Keynote Address, Workshop eNetworks Cyber-engineering: Infrastructures for Cyber-Physical Ecosystems.

[3.213] M. Prica and M. D. Ilić. Optimal distribution service pricing for investment planning. In *2007 IEEE Power Engineering Society General Meeting*, pages 1–7, June 2007.

[3.214] L. Xie and M. D. Ilić. Dynamic aggregation for monitoring and decision making in electric power systems. In *International Workshop and Conference on Network Sciences, New York City, NY*, May 2007.

[3.215] Le Xie, J. Ilić, and M. D. Ilić. Novel performance index and multi-layered information structure for monitoring quasi-static voltage problems. In *2007 IEEE Power Engineering Society General Meeting*, pages 1–7, June 2007.

[3.216] Y. Zhang, M. D. Ilić, and O. Tonguz. Application of support vector machine classification to enhanced protection relay logic in electric power grids. In *2007 Large Engineering Systems Conference on Power Engineering*, pages 31–38, Oct 2007.

[3.217] E. A. Blood, B. H. Krogh, and M. D. Ilić. Electric power system static state estimation through Kalman filtering and load forecasting. In *2008 IEEE Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century*, pages 1–6, July 2008.

[3.218] M. Houwing and M. Ilić. The value of IT for virtual power plants with micro cogeneration systems. In *2008 IEEE International Conference on Systems, Man and Cybernetics*, pages 1–6, Oct 2008.

[3.219] M. D. Ilić, Le Xie, and U. A. Khan. Modeling future cyber-physical energy systems. In *2008 IEEE Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century*, pages 1–9, July 2008.

[3.220] U. A. Khan, M. D. Ilić, and J. M. F. Moura. Cooperation for aggregating complex electric power networks to ensure system observability. In *2008 First International Conference on Infrastructure Systems and Services: Building Networks for a Brighter Future (INFRA)*, pages 1–6, Nov 2008.

[3.221] R. E. Kurlinski, L. Lave, and M. D. Ilić. Creating reliability choice: How building less reliability into electric power grids could improve the welfare of all customers. In *2008 IEEE Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century*, pages 1–8, July 2008.

[3.222] Juhua Liu, B. H. Krogh, and M. D. Ilić. Saturation-induced frequency instability in electric power systems. In *2008 IEEE Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century*, pages 1–7, July 2008.

[3.223] Juhua Liu, B. H. Krogh, and M. D. Ilić. Saturation-induced instability in electric power systems. In *2008 American Control Conference*, pages 580–585, June 2008.

[3.224] M. Prica and M. Ilić. Maximizing reliable service by coordinated islanding and load management in distribution systems under stress. In *Proc. of the 16th Power Systems Computation Conference, Glasgow, Scotland.*, July 2008.

[3.225] N. Talaat and M. Ilić. ANNs based on subtractive cluster feature for classifying power quality. In *2008 40th North American Power Symposium*, pages 1–7, Sept 2008.

[3.226] Zhiyong Wu and M. Ilić. The effects of multi-temporal electricity markets on short- and long-term bidding. In *2008 IEEE Power and Energy Society General Meeting - Conversion and Delivery of Electrical Energy in the 21st Century*, pages 1–8, July 2008.

[3.227] Zhiyong Wu and Marija D. Ilić. Generation investment under stratum energy market structure. In *2008 IEEE Power Engineering Society General Meeting, Pittsburgh, PA.*, July 2008.

[3.228] L. Xie and M. D. Ilić. Model predictive dispatch in electric energy systems with intermittent resources. In *2008 IEEE International Conference on Systems, Man and Cybernetics*, pages 42–47, Oct 2008.

[3.229] L. Xie and M. D. Ilić. A module-based approach to integrating wind power for guaranteed power system stability. In *2008 First International Conference on Infrastructure Systems and Services: Building Networks for a Brighter Future (INFRA)*, pages 1–6, Nov 2008.

[3.230] L. Xie and M. D. Ilić. Module-based modeling of cyber-physical power systems. In *2008 The 28th International Conference on Distributed Computing Systems Workshops*, pages 513–518, June 2008.

[3.231] N. Abdel-Karim, M. Small, and M. Ilić. Short term wind speed prediction by finite and infinite impulse response filters: A state space model representation using discrete Markov process. In *2009 IEEE Bucharest PowerTech*, pages 1–8, June 2009.

[3.232] M. Houwing, R. R. Negenborn, M. D. Ilić, and B. De Schutter. Model predictive control of fuel cell micro cogeneration systems. In *2009 International Conference on Networking, Sensing and Control*, pages 708–713, March 2009.

[3.233] M. Houwing, G. Papaefthymiou, P. W. Heijnen, and M. D. Ilić. Balancing wind power with virtual power plants of micro-CHPs. In *2009 IEEE Bucharest PowerTech*, pages 1–7, June 2009.

[3.234] M. H. Nazari and M. Ilić. Technical challenges in modernizing distribution electric power systems with large number of distributed generators. In *2009 IEEE Bucharest PowerTech*, pages 1–8, June 2009.

[3.235] M. Prica and M. Ilić. A novel fault-dependent-time-settings algorithm for overcurrent relays. In *2009 IEEE Power Energy Society General Meeting*, pages 1–9, July 2009.

[3.236] M. Prica, M. Ilić, and J. Ilić. On the fundamental importance of relating operating and planning objectives in the changing electric power industry. In *41st North American Power Symposium*, pages 1–6, Oct 2009.

[3.237] N. Talaat and M. Ilić. A method for computing non-localized harmonic propagation and resonance in the electric energy systems. In *41st North American Power Symposium*, pages 1–6, Oct 2009.

[3.238] L. Xie and M. D. Ilić. Model predictive economic/environmental dispatch of power systems with intermittent resources. In *2009 IEEE Power Energy Society General Meeting*, pages 1–6, July 2009.

[3.239] L. Xie, J. Y. Joo, and M. D. Ilić. Integration of intermittent resources with price-responsive loads. In *41st North American Power Symposium*, pages 1–6, Oct 2009.

[3.240] M. Ilić. Adaptive reliability revisited. In *IEEE PES General Meeting*, pages 1–2, July 2010.

[3.241] M. Ilić. Making transmission systems smart: An opportunity which should not be missed. In *IEEE PES General Meeting*, pages 1–2, July 2010.

[3.242] M. Ilić. Teaching smart grids: Yet another challenge and opportunity for transforming power systems curriculum. In *IEEE PES General Meeting*, pages 1–2, July 2010.

[3.243] M. Ilić. Transforming supervisory control and data acquisition (SCADA) into dynamic monitoring and decision systems (DYMONDS): The missing link in smart grids. In *IEEE PES General Meeting*, pages 1–4, July 2010.

[3.244] Marija Ilić. On the inter-dependence of (N-1) reliability standards and smart grid standards. In *IEEE PES 2010, Minneapolis, MN*, July 2010. Invited, Special Panel on Reliability and Smart Grid: Public Good or Commodity.

[3.245] J. Y. Joo and M. D. Ilić. Adaptive load management (ALM) in electric power systems. In *2010 International Conference on Networking, Sensing and Control (ICNSC)*, pages 637–642, April 2010.

[3.246] J. Y. Joo and M. D. Ilić. A multi-layered adaptive load management (ALM) system: Information exchange between market participants for efficient and reliable energy use. In *IEEE PES T D 2010*, pages 1–7, April 2010.

[3.247] J. Liu, B. H. Krogh, and M. D. Ilić. Robust control design for frequency regulation in power systems with high wind penetration. In *Proceedings of the 2010 American Control Conference*, pages 4349–4354, June 2010.

[3.248] Zhijian Liu and M. D. Ilić. Toward PMU-based robust automatic voltage control (AVC) and automatic flow control (AFC). In *IEEE PES General Meeting*, pages 1–8, July 2010.

[3.249] M. H. Nazari, M. Ilić, and J. P. Lopes. Dynamic stability and control design of modern electric energy systems with large penetration of distributed generators. In *2010 IREP Symposium Bulk Power System Dynamics and Control - VIII (IREP)*, pages 1–7, Aug 2010.

[3.250] M. Honarvar Nazari and M. Ilić. Potential for efficiency improvement of future electric energy systems with distributed generation units. In *IEEE PES General Meeting*, pages 1–9, July 2010.

[3.251] L. Xie and M. D. Ilić. Emission-concerned economic dispatch: Possible formulations and implementations. In *IEEE PES T D 2010*, pages 1–6, April 2010.

[3.252] M. Cvetkovic and M. Ilić. Nonlinear control for stabilizing power systems during major disturbances. In *IFAC World Congress, Milano, Italy*, September 2011.

[3.253] M. Cvetkovic and M. Ilić. PMU based transient stabilization using FACTS. In *2011 IEEE/PES Power Systems Conference and Exposition*, pages 1–6, March 2011.

[3.254] M. Cvijic and M. Ilić. Contingency screening in multi-control area system using coordinated DC power flow. In *IEEE PES Innovative Smart Grid Technologies (ISGT), UK.*, December 2011.

[3.255] S. Cvijic and M. Ilić. On limits to the graph-theoretic approaches in the electric power systems. In *2011 North American Power Symposium*, pages 1–6, Aug 2011.

[3.256] Sanja Cvijic and Marija Ilić. Contingency screening in a multi-control area system using coordinated DC power flow. In *IEEE PES Innovative Smart Grid Technologies (ISGT), UK.*, December 2011.

[3.257] M. Ilić, M. Cvetkovic, K. Bachovchin, and A. Hsu. Toward a systems approach to power-electronically switched T&D equipment at value. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–7, July 2011.

[3.258] M. Ilić, J. Lang, E. Litvinov, X. Luo, and J. Tong. Toward coordinated-voltage-control-enabled HV smart grids. In *2011 2nd IEEE PES International Conference and Exhibition on Innovative Smart Grid Technologies*, pages 1–8, Dec 2011.

[3.259] M. Ilić and Q. Liu. Toward a framework for sustainable cyber-physical energy systems: Frequency regulation revisited. In *IFAC World Congress, Milano, Italy*, September 2011.

[3.260] M. D. Ilić. The challenge of IT-enabled policy design for sustainable electric energy systems. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–7, July 2011.

[3.261] M. D. Ilić. Evolution of reliability toward meeting grid-enabled users needs. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–5, July 2011.

[3.262] M. D. Ilić. Operating-conditions and decisions-driven test systems (OCDTS). In *2011 IEEE Power and Energy Society General Meeting*, pages 1–1, July 2011.

[3.263] M. D. Ilić. Pricing uncertainties and inter-temporal constraints: By whom, to whom and how much? In *2011 IEEE Power and Energy Society General Meeting*, pages 1–7, July 2011.

[3.264] M. D. Ilić, K. D. Bachovchin, and A. S. Lewis. Costs and benefits of transmission congestion management. In *2011 IEEE/PES Power Systems Conference and Exposition*, pages 1–7, March 2011.

[3.265] M. D. Ilić and J. Donadee. Distribution pricing and tariff structure: The ongoing us reforms. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–2, July 2011.

[3.266] M. D. Ilić and J. H. Lang. The complexity of voltage and reactive power dispatch in control centers: From analysis to on-line decision making. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–8, July 2011.

[3.267] M. D. Ilić, N. Popli, J. Y. Joo, and Y. Hou. A possible engineering and economic framework for implementing demand side participation in frequency regulation at value. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–7, July 2011.

[3.268] D. Jenicek, W. Inam, and M. Ilić. Locational dependence of maximum installable PV capacity in LV networks while maintaining voltage limits. In *2011 North American Power Symposium*, pages 1–5, Aug 2011.

[3.269] J. Y. Joo and M. Ilić. Multi-temporal risk minimization of adaptive load management in electricity spot markets. In *2011 2nd IEEE PES International Conference and Exhibition on Innovative Smart Grid Technologies*, pages 1–7, Dec 2011.

[3.270] Q. Li, R. Negi, and M. D. Ilić. Phasor measurement units placement for power system state estimation: A greedy approach. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–8, July 2011.

[3.271] Huaiwei Liao and M. Ilić. Stress test model of cascading failures in power grids. In *2011 North American Power Symposium*, pages 1–5, Aug 2011.

[3.272] V. Ramesh, U. Khanz, and M. D. Ilić. Data aggregation strategies for aligning PMU and AMI measurements in electric power distribution networks. In *2011 North American Power Symposium*, pages 1–7, Aug 2011.

[3.273] R. A. Verzijlbergh, M. D. Ilić, and Z. Lukszo. The role of electric vehicles on a green island. In *2011 North American Power Symposium*, pages 1–7, Aug 2011.

[3.274] R. A. Verzijlbergh, Z. Lukszo, J. G. Slootweg, and M. D. Ilić. The impact of controlled electric vehicle charging on residential low voltage networks. In *2011 International Conference on Networking, Sensing and Control*, pages 14–19, April 2011.

[3.275] R. A. Verzijlbergh, Z. Lukszo, E. Veldman, J. G. Slootweg, and M. Ilić. Deriving electric vehicle charge profiles from driving statistics. In *2011 IEEE Power and Energy Society General Meeting*, pages 1–6, July 2011.

[3.276] Yang Weng, R. Negi, Qixing Liu, and M. D. Ilić. Robust state-estimation procedure using a least trimmed squares pre-processor. In *ISGT 2011*, pages 1–6, Jan 2011.

[3.277] N. Abdel-Karim and M. Ilić. Modeling uncertain load and wind power in the electric energy systems. In *2012 IEEE Power and Energy Society General Meeting*, pages 1–8, July 2012.

[3.278] M. Althoff, M. Cvetkovic, and M. Ilić. Transient stability analysis by reachable set computation. In *2012 3rd IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe)*, pages 1–8, Oct 2012.

[3.279] M. Cvetkovic and M. Ilić. Energy-based transient stabilization using facts in systems with wind power. In *2012 IEEE Power and Energy Society General Meeting*, pages 1–7, July 2012.

[3.280] S. Cvijic, M. Cvetkovic, and M. Ilić. A graph-theoretic approach to modeling network effects of phase shifters on active power loop flows. In *2012 North American Power Symposium (NAPS)*, pages 1–6, Sept 2012.

[3.281] S. Cvijic, M. Cvetkovic, and M. Ilić. A novel method for phase shifter modeling in electric power networks with loop flows. In *North American Power Symposium, Urbana, Champaign, IL*, September 2012.

[3.282] S. Cvijic and M. Ilić. Area-level reduction of wheeling loop flows in regional power networks. In *2012 3rd IEEE PES Innovative Smart Grid Technologies Europe (ISGT Europe)*, pages 1–8, Oct 2012.

[3.283] Sanja Cvijic, Peter Feldmann, and Marija Ilić. Applications of homotopy for solving AC power flow and AC optimal power flow. In *PES General Meeting in San Diego*, July 2012.

[3.284] Sanja Cvijic and Marija Ilić. Optimal clustering for efficient computations of contingency effects in large regional power systems. In *PES General Meeting in San Diego*, July 2012.

[3.285] J. Donadee and M Ilić. Optimal decision making for electric vehicles providing electric grid frequency regulation: A stochastic dynamic programming approach. In *IEEE Power and Energy Society General Meeting, San Diego, CA*, July 2012.

[3.286] J. Donadee and M. Ilić. Stochastic co-optimization of charging and frequency regulation by electric vehicles. In *2012 North American Power Symposium (NAPS)*, pages 1–6, Sept 2012.

[3.287] A. Hsu and M. D. Ilić. Distributed newton method for computing real decoupled power flow in lossy electric energy networks. In *2012 North American Power Symposium (NAPS)*, pages 1–7, Sept 2012.

[3.288] M. Ilić. A systems approach to teaching Smart Grids. In *2012 IEEE Power and Energy Society General Meeting*, pages 1–2, July 2012.

[3.289] M. Ilić, M. Cvetkovic, K. Bachovchin, and Q. Liu. Modeling, analysis and control design complexities in future electric energy systems. In *2012 15th International Power Electronics and Motion Control Conference (EPE/PEMC)*, pages LS2b.3–1–LS2b.3–6, Sept 2012.

[3.290] M. D. Ilić and A. Hsu. Toward distributed contingency screening using line flow calculators and dynamic line rating units (DLRs). In *2012 45th Hawaii International Conference on System Sciences*, pages 2027–2035, Jan 2012.

[3.291] M. D. Ilić and Q. Liu. Toward standards for model-based control of dynamic interactions in large electric power grids. In *Proceedings of The 2012 Asia Pacific Signal and Information Processing Association Annual Summit and Conference*, pages 1–8, Dec 2012.

[3.292] Marija Ilić and Qixin Liu. Toward dynamic standards for future electric energy systems. In *APSIPA Conference*, December 2012. http://www.apsipa2012.org/index.html.

[3.293] Marija D. Ilić, Milos Cvetkovic, Kevin Bachovchin, and Qixing Liu. Modeling, analysis and control design complexities in future electric energy systems. In *15th International IEEE Power Electronics and Motion Control Conference and Exposition, Novi Sad, Serbia*, September 2012.

[3.294] J. Y. Joo and M. Ilić. Distributed multi-temporal risk management approach to designing dynamic pricing. In *2012 IEEE Power and Energy Society General Meeting*, pages 1–6, July 2012.

[3.295] Q. Liu and M. D. Ilić. Enhanced automatic generation control (E-AGC) for future electric energy systems. In *2012 IEEE Power and Energy Society General Meeting*, pages 1–8, July 2012.

[3.296] M. H. Nazari and M. Ilić. A dynamic modeling framework for future distribution energy systems. In *2012 North American Power Symposium (NAPS)*, pages 1–6, Sept 2012.

[3.297] S. Pequito, Q. Liu, S. Kar, and M. D. Ilić. PMU placement to ensure observable frequency and voltage dynamics: A structured system approach. In *8th CMU conference On the Electricity Industry Data-Drive Sustainable Energy Systems*, Mar 2012.

[3.298] L. Rao, X. Liu, M. D. Ilić, and J. Liu. Distributed coordination of internet data centers under multi-regional electricity markets. *Proceedings of the IEEE*, 100(1):269–282, Jan 2012.

[3.299] C. Y. Tee and M. Ilić. Optimal investment decisions in transmission expansion. In *2012 North American Power Symposium (NAPS)*, pages 1–6, Sept 2012.

[3.300] R. A. Verzijlbergh, Z. Lukszo, and M. D. Ilić. Comparing different EV charging strategies in liberalized power systems. In *2012 9th International Conference on the European Energy Market*, pages 1–8, May 2012.

[3.301] Y. Weng, Q. Li, R. Negi, and M. Ilić. Semidefinite programming for power system state estimation. In *2012 IEEE Power and Energy Society General Meeting*, pages 1–8, July 2012.

[3.302] Y. Weng, R. Negi, and M. D. Ilić. A search method for obtaining initial guesses for smart grid state estimation. In *2012 IEEE Third International Conference on Smart Grid Communications (SmartGridComm)*, pages 599–604, Nov 2012.

[3.303] L. Xie, Y. Zhang, and M. D. Ilić. Multi-scale integration of physics-based and data-driven models in power systems. In *2012 IEEE/ACM Third International Conference on Cyber-Physical Systems*, pages 129–137, April 2012.

[3.304] Sanja Cvijic and Marija Ilić. Distributed multiparty DC power flow algorithm with secure exchange of information. In *Workshop on Control of Cyber-Physical Systems, Baltimore, MD*, March 2013.

[3.305] J. H. Eto, M. Kezunovic, and M. Ilić. Introduction to electric power systems monitoring and control minitrack. In *2013 46th Hawaii International Conference on System Sciences*, pages 2282–2282, Jan 2013.

[3.306] A. Hsu and M Ilić. Ensuring feasible power delivery using an optimization-based power flow model. In *Techcon 2013, Austin, TX*, September 2013.

[3.307] M. Ilić, J. Y. Joo, P. M. S. Carvalho, L. A. F. M. Ferreira, and B. Almeida. Dynamic monitoring and decision systems (DYMONDS) framework for reliable and efficient congestion management in smart distribution grids. In *2013 IREP Symposium Bulk Power System Dynamics and Control - IX Optimization, Security and Control of the Emerging Power Grid*, pages 1–9, Aug 2013.

[3.308] M. H. Nazari, M. Ilić, and G. Morgan. Toward model-based policy design for reliable and efficient integration of distributed generators. In *2013 IEEE Power Energy Society General Meeting*, pages 1–5, July 2013.

[3.309] S. Pequito, C. Agbi, N. Popli, S. Kar, A. Aguiar, and M. Ilić. Designing decentralized control systems without structural fixed modes: A multilayer approach. In *Proceedings of the 4th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*, 2013.

[3.310] S. Pequito, Q. Liu, S. Kar, and M. D. Ilić. PMU placement to ensure observable frequency and voltage dynamics: A structured system approach. In *2013 46th Hawaii International Conference on System Sciences*, pages 2327–2336, Jan 2013.

[3.311] S. Pequito, N. Popli, S. Kar, M. D. Ilić, and A. P. Aguiar. A framework for actuator placement in large scale power systems: Minimal strong structural controllability. In *2013 5th IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP)*, pages 416–419, Dec 2013.

[3.312] Y. Weng, B. Fardanesh, M. D. Ilić, and R. Negi. Novel approaches using semidefinite programming method for power systems state estimation. In *2013 North American Power Symposium (NAPS)*, pages 1–6, Sept 2013.

[3.313] Y. Weng, Q. Li, R. Negi, and M. Ilić. Distributed algorithm for SDP state estimation. In *2013 IEEE PES Innovative Smart Grid Technologies Conference (ISGT)*, pages 1–6, Feb 2013.

[3.314] Y. Weng, R. Negi, and M. D. Ilić. Graphical model for state estimation in electric power systems. In *2013 IEEE International Conference on Smart Grid Communications (SmartGridComm)*, pages 103–108, Oct 2013.

[3.315] Y. Weng, R. Negi, and M. D. Ilić. Historical data-driven state estimation for electric power systems. In *2013 IEEE International Conference on Smart Grid Communications (SmartGridComm)*, pages 97–102, Oct 2013.

[3.316] S. Baros and M. Ilić. intelligent balancing authorities (iBAs) for transient stabilization of large power systems. In *2014 IEEE PES General Meeting — Conference Exposition*, pages 1–5, July 2014.

[3.317] P. M. S. Carvalho, L. A. F. M. Ferreira, B. S. Almeida, and M. D. Ilić. Improved demand controllability by grid reconfiguration for congestion management. In *2014 Power Systems Computation Conference*, pages 1–6, Aug 2014.

[3.318] M. Cvetkovic and M. Ilić. Cooperative line-flow power electronics control for transient stabilization. In *53rd IEEE Conference on Decision and Control*, pages 3280–3285, Dec 2014.

[3.319] M. Cvetkovic and M. Ilić. A two-level approach to tuning FACTS for transient stabilization. In *2014 IEEE PES General Meeting — Conference Exposition*, pages 1–5, July 2014.

[3.320] J. Donadee and M. Ilić. Estimating the rate of battery degradation under a stationary Markov operating policy. In *2014 IEEE PES General Meeting — Conference Exposition*, pages 1–5, July 2014.

[3.321] J. Donadee, M. Ilić, and O. Karabasoglu. Optimal autonomous charging of electric vehicles with stochastic driver behavior. In *2014 IEEE Vehicle Power and Propulsion Conference (VPPC)*, pages 1–6, Oct 2014.

[3.322] M. Ilić. Critical needs for multi-disciplinary approach to teaching electric energy systems. In *ISGT 2014*, pages 1–5, Feb 2014.

[3.323] M. Ilić. Critical needs for multi-disciplinary approach to teaching electric energy systems. In *IEEE Innovative Smart Grid Technologies Conference (ISGT)*, 2014.

[3.324] M. Ilić. Integration of heterogeneous small test beds for emulating large-scale smart power grids the emphasis on cyber architectures. In *2014 Workshop on Modeling and Simulation of Cyber-Physical Energy Systems (MSCPES)*, pages 1–8, April 2014.

[3.325] M. Ilić, K. Bachovchin, M. Cvetkovic, and X. Miao. Physics-based foundations for cyber and market design in complex electric energy systems. In *53rd IEEE Conference on Decision and Control*, pages 4635–4654, Dec 2014.

[3.326] M. Ilić, X. Yin, Q. Liu, and Y. Weng. Toward combining intra-real time dispatch (RTD) and AGC for on-line power balancing. In *IEEE Power and Energy Society General Meeting*, 2014.

[3.327] M. D. Ilić. DYMONDS computer platform for smart grids. In *2014 Power Systems Computation Conference*, pages 1–7, Aug 2014.

[3.328] J. Y. Joo and M. Ilić. Distributed scheduling of demand resources in a congested network. In *2014 IEEE PES General Meeting — Conference Exposition*, pages 1–5, July 2014.

[3.329] J. Y. Joo and M. Ilić. Multi-layered optimization of demand resources using lagrange dual decomposition. In *2014 IEEE PES General Meeting — Conference Exposition*, pages 1–1, July 2014.

[3.330] S. Junlakarn and M. Ilić. Toward implementation of the reconfiguration for providing differentiated reliability options in distribution systems. In *2014 IEEE PES General Meeting — Conference Exposition*, pages 1–5, July 2014.

[3.331] N. Popli and M. D. Ilić. Storage devices for automated frequency regulation and stabilization. In *2014 IEEE PES General Meeting — Conference Exposition*, pages 1–5, July 2014.

[3.332] C. Y. Tee and M. Ilić. Flexibility in smart transmission planning. In *ISGT 2014*, pages 1–5, Feb 2014.

[3.333] Y. Weng, C. Faloutsos, M. Ilić, and R. Negi. Speed up of data-driven state estimation using low-complexity indexing method. In *IEEE PES General Meeting Conference and Exposition*, 2014.

[3.334] Y. Weng, C. Faloutsos, and M. D. Ilić. Data-driven topology estimation. In *2014 IEEE International Conference on Smart Grid Communications (SmartGridComm)*, pages 560–565, Nov 2014.

[3.335] Y. Weng and M. D. Ilić. An approach to achieving global optimum of AC electric power system state estimators. In *ISGT 2014*, pages 1–5, Feb 2014.

[3.336] M. H. Amini, J. Frye, M. D. Ilić, and O. Karabasoglu. Smart residential energy scheduling utilizing two stage mixed integer linear programming. In *2015 North American Power Symposium (NAPS)*, pages 1–6, Oct 2015.

[3.337] M. H. Amini, M. D. Ilić, and O. Karabasoglu. DC power flow estimation utilizing Bayesian-based LMMSE estimator. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.338] M. H. Amini, O. Karabasoglu, M. D. Ilić, K. G. Boroojeni, and S. S. Iyengar. ARIMA-based demand forecasting method considering probabilistic model of electric vehicles' parking lots. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.339] M. Hadi Amini, M. Ilić, and O. Karabasoglu. DC power flow estimation utilizing Bayesian-based LMMSE estimator. In *IEEE Power and Energy Society General Meeting*, 2015.

[3.340] M. Hadi Amini, M. Ilić, and O. Karabasoglu. On the effect of electric vehicle parking lots as dispatchable loads on the power system loss. In *INFORMS Annual Meeting*, 2015.

[3.341] K. D. Bachovchin and M. D. Ilić. Transient stabilization of power grids using passivity-based control with flywheel energy storage systems. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.342] S. Baros and M. Ilić. Robust ectropy-based cooperative control of a wind DFIG for transient stabilization and MPPT. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.343] S. Baros and M. D. Ilić. Multi-objective lyapunov-based control of a STATCOM/BESS. In *2015 IEEE Power Energy Society Innovative Smart Grid Technologies Conference (ISGT)*, pages 1–5, Feb 2015.

[3.344] S. Baros and M. D. Ilić. On transient stability and voltage regulation through MIMO feedback linearizing control of generator and energy storage. In *2015 American Control Conference (ACC)*, pages 4320–4326, July 2015.

[3.345] M. Cvetkovic and M. Ilić. Ectropy-based nonlinear control of FACTS for transient stabilization. In *2015 IEEE Power Energy Society General Meeting*, pages 1–1, July 2015.

[3.346] M. Cvetkovic and M. Ilić. Interaction variables for distributed numerical integration of nonlinear power system dynamics. In *2015 53rd Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, pages 560–566, Sept 2015.

[3.347] M. Ilić, S. Cvijic, J. H. Lang, and J. Tong. Optimal voltage management for enhancing electricity market efficiency. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.348] M. Ilić, S. Cvijic, J. H. Lang, J. Tong, and D. Obadina. Operating beyond today's PV curves: Challenges and potential benefits. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.349] S. Junlakarn and M. Ilić. Provision of differentiated reliable services in distribution systems based on customer preferences. In *2015 North American Power Symposium (NAPS)*, pages 1–6, Oct 2015.

[3.350] X. Miao and M. D. Ilić. Model predictive excitation control for constrained frequency and voltage stabilization. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.351] J. F. Prada and M. Ilić. Making the case for interregional transmission projects: Evaluation of benefits and allocation of costs. In *USAEE/IAEE North American Conference (US Assoc. for Energy Economics)*, 2015.

[3.352] J. F. Prada and M. D. Ilić. Locational allocation and pricing of responsive contingency reserves. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.353] M. Prica, M. Ilić, and J. Ilić. An algorithmic interactive planning framework in support of sustainable technologies. In *2015 IEEE Power Energy Society Innovative Smart Grid Technologies Conference (ISGT)*, pages 1–5, Feb 2015.

[3.354] M. S. Uddin, A. Kuh, Yang Weng, and M. Ilić. Online bad data detection using kernel density estimation. In *2015 IEEE Power Energy Society General Meeting*, pages 1–5, July 2015.

[3.355] M. Wagner, K. Bachovchin, and M. Ilić. Computer architecture and multi time-scale implementations for smart grid in a room simulator. In *9th IFAC Symposium on Control of Power and Energy Systems (CPES), New Delhi, India.*, 2015.

[3.356] X. Yin, M. D. Ilić, and B. Sinopoli. Toward design of risk-based real-time dispatch at value. In *2015 IEEE Power Energy Society Innovative Smart Grid Technologies Conference (ISGT)*, pages 1–5, Feb 2015.

[3.357] S. Baros and M. Ilić. Distributed control of wind DFIGs with integrated storage for predictable power output. In *2016 IEEE Power and Energy Society General Meeting (PESGM)*, pages 1–5, July 2016.

[3.358] S. Baros and M. Ilić. Distributed dynamic dispatching of deloaded wind DFIGs via consensus torque control. In *2016 IEEE Power and Energy Society General Meeting (PESGM)*, pages 1–5, July 2016.

[3.359] P. M. S. Carvalho, L. A. F. M. Ferreira, J. C. Botas, M. D. Ilić, Xia Miao, and K. D. Bachovchin. Ultimate limits to the fully decentralized power inverter control in distribution grids. In *2016 Power Systems Computation Conference (PSCC)*, pages 1–7, June 2016.

[3.360] B. Ansari, S. Babaei, B. Fardanesh, S. Cvijic, J. Lang, and M. Ilic. Data-driven decision system for adaptive control of facts devices in the new york state grid. In *2017 IEEE Power Energy Society General Meeting*, pages 1–5, July 2017.

[3.361] S. Cvijić, J. Lang, M. Ilić, S. Babaei, and G. Stefopoulos. Reliable adaptive optimization demonstration using big data. In *2017 IEEE Power Energy Society General Meeting*, pages 1–5, July 2017.

[3.362] A. Dowdle and M. Ilić. Interconnected state-space modeling for turboelectric aircraft. In *2017 North American Power Symposium (NAPS)*, pages 1–6, Sep. 2017.

[3.363] M. Ilić. Toward assessing effects of new technologies in electric energy systems: New modular modeling and simulation paradigm (plenary). In *Proceedings IEEE North American Power Conference, University of West Virginia, WV*, Sep. 2017.

[3.364] M. D. Ilić. Toward a unified multi-layered modeling and simulation paradigm for electric energy systems. In *2017 North American Power Symposium (NAPS)*, pages 1–6, Sep. 2017.

[3.365] R. Jaddivada and M. Ilić. A distribution management system for implementing synthetic regulation reserve. In *2017 North American Power Symposium (NAPS)*, pages 1–6, Sep. 2017.

[3.366] X. Miao and M. D. Ilić. Distributed model predictive control of synchronous machines for stabilizing microgrids. In *2017 North American Power Symposium (NAPS)*, pages 1–6, Sep. 2017.

[3.367] Y. Weng, Y. Liao, M. Ilic, and D. Srinivasan. Electric vehicle robot-based testbed for future grid's evaluation. In *2017 IEEE Conference on Energy Internet and Energy System Integration (EI2)*, pages 1–6, Nov 2017.

[3.368] S. Cvijić, M. Ilić, E. Allen, and J. Lang. Using extended ac optimal power flow for effective decision making. In *2018 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe)*, pages 1–6, Oct 2018.

[3.369] M. D. Ilić, R. Jaddivada, and X. Miao. Rapid automated assessment of microgrid performance software system (ramps). In *2018 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe)*, pages 1–6, Oct 2018.

[3.370] M. D. Ilić, R. Jaddivada, and X. Miao. Scalable electric power system simulator. In *2018 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe)*, pages 1–6, Oct 2018.

[3.371] M. D. Ilic and R. Jaddivada. Fundamental modeling and conditions for realizable and efficient energy systems. In *2018 IEEE Conference on Decision and Control (CDC)*, pages 5694–5701, Dec 2018.

[3.372] R. Jaddivada, S. Davuluri, M. Korpaas, and M. Ilić. Recursive algorithm for resource allocation in radial network systems. In *2019 8th Mediterranean Conference on Embedded Computing (MECO)*, pages 1–4, June 2019.

[3.373] M. Lauer, R. Jaddivada, and M. Ilić. Household energy prediction: Methods and applications for smarter grid design. In *2019 8th Mediterranean Conference on Embedded Computing (MECO)*, pages 1–4, June 2019.

[3.374] X. Miao, X. Wu, U. Münz, and M. Ilić. Multi-layered grid admittance matrix estimation for electric power systems with partial measurements. In *2019 American Control Conference (ACC)*, pages 1288–1294, July 2019.

[3.375] X. Miao, M. Ilić, and Q. Liu. Enhanced automatic generation control (e-agc) for electric power systems with large intermittent renewable energy sources. In *2019 IEEE Power Energy Society General Meeting (PESGM)*, pages 1–5, Aug 2019.

[3.376] X. Miao, M. Ilić, X. Wu, and U. Münz. Distribution grid admittance estimation with limited non-synchronized measurements. In *2019 IEEE Power Energy Society General Meeting (PESGM)*, pages 1–5, Aug 2019.

[3.377] M. D. Ilic and R. Jaddivada. Exergy/energy dynamics-based integrative modeling and control for difficult hybrid aircraft missions. In *2019 AIAA/IEEE Electric Aircraft Technologies Symposium (EATS)*, pages 1–33, Aug 2019.

[3.378] M. Ilic and R. Jaddivada. Introducing dymonds-as-a-service (dymaas) for internet of things. In *2019 IEEE High Performance Extreme Computing Conference (HPEC)*, pages 1–9, Sep. 2019.

[3.379] M. Ilic and R. Jaddivada. Toward technically feasible and economically efficient integration of distributed energy resources. In *2019 57th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, pages 796–803, Sep. 2019.

[3.380] S. Davuluri, R. Jaddivada, and M. Ilic. Enabling customers through distributed economic dispatch. In *2019 North American Power Symposium (NAPS)*, pages 1–6, Oct 2019.

[3.381] X. Miao and M. D. Ilić. Modeling and distributed control of microgrids: A negative feedback approach. In *2019 IEEE 58th Conference on Decision and Control (CDC)*, pages 1937–1944, Dec 2019.

[3.382] Dan Wu, Janak Agrawal, Pallavi Bharadwaj, Le Li, Jinyi Zhang and Marija Ilić On The Validity of Decomposition for Distributed Parameter Estimation in Complex Dynamical Systems The Case of Cooling Systems *Proceedings of the IEEE North American Electric Power Systems Symposium*, March 2021.

[3.383] Pallavi Bharadwaj, Janak Agrawal, Rupamathi Jaddivada, Min Zhang and Marija Ilić Measurement-based Validation of Energy-Space Modelling in Multi-Energy Systems, *Proceedings of the IEEE North American Electric Power Systems Symposium*, March 2021.

[3.384] Ilić, M., Carvalho, P., Lessard, D., Minimal Coordination of Dynamic Reserves for Flexible Operations at Value: The Case of Azores Islands, 21PESGM2116, accepted for presentation at IEEE PES GM , Washington DC, 2021.

Other Major Publications

[4.1] Medanic, J., B. Avramovic, M. Ilić, and V. Todorovic, Methodology for the Security Assessment of the Serbian Electric Power System, Technical Report, Institute M. Pupin, Belgrade, Yugoslavia, 1976.

[4.2] Ilić, M., Multicriteria Optimization of Energy Control in Complex Systems as Applied to Power Systems, MEE Thesis, University of Belgrade, Yugoslavia, January 1977.

[4.3] Ilić-Spong, M., A New Approach to Load Flow Using Complex Power-Complex Voltage Graph, DSc Thesis, Washington University, St. Louis, MO, 1980.

[4.4] Zaborszky, J., K.V. Prasad, K.W. Whang, and M. Ilić-Spong, Towards a Comprehensive Analysis and Operating Practice of the Large Compound HV-AC-DC System, Progress Report on Contract DOE-78-D-01-3090 to the U.S. Department of Energy, Washington, DC, 1980.

[4.5] M. Ilić-Spong, Discussion of the paper, a new method for computerized solution of power flow equations by J.W. Bandler and M.A. El-Kady, IEEE Transactions on Power Apparatus and Systems, PAS-101:1-9, 1982.

[4.6] Zaborszky, J., K.V. Prasad, K.W. Whang, M. Ilić-Spong, G. Huang, and L.J. Chiang, Towards a Comprehensive Analysis and Operating Practice of the Large Compound HV-AC-DC Systems, DOE Final Report, SSM Report # 8203A, 1982.

[4.7] Development of a Decoupling Methodology for On-Line Detection of System Instabilities, Volumes I and II, US DOE Final Report, January 1987.

[4.8] Stobart, W.J. and M. Ilić, Development of a Smart Algorithm for Voltage, Monitoring and Control, MIT Laboratory for Electromagnetic and Electronic Systems TR-90-002, 1987.

[4.9] Helm, M.S., M. Ilić-Spong, M.A. Pai, and P.W. Sauer, Eighth Annual Report of the Power Affiliates Program at the University of Illinois, PAP-TR-87-1, May 1987.

[4.10] M.L. Crow, M. Ilić, and M.A. Pai, Waveform relaxation methods for solving differential-algebraic equations and their applications to power systems simulations. In SIAM Meeting, Denver, CO, October 1987.**

[4.11] Taylor, D.G., M.J. Woolley, and M. Ilić, Linearizing and Implementation of a Decoupling Transformation for the Reluctance Motor, (videotape), Division of Instructional Media and Technology, University of Illinois, Urbana, IL, May 1988.

[4.12] M. Ilić, New approaches to voltage and reactive power monitoring and control. In Proceedings of a Special NSF/EPRI/Engineering Foundation Sponsored Workshop on Voltage Problems, Potosi, MO, pages 8.1-8.27, September 1988.

[4.13] M. Ilić, New approaches to voltage monitoring and control, IEEE Control Systems Magazine, 9(1):5-11, January 1989.

[4.14] M. Ilić, Energy systems control, IEEE Control Systems Magazine Special Issue on Energy Systems Control, pages 3-4, January 1989.

[4.15] Ilić, M., Research Agenda for Power Systems Monitoring and Control: Voltage Related Problems, MIT Laboratory for Electromagnetic and Electronic Systems TR90-004, October 1990.

[4.16] M. Ilić and C.M. Jayko, Modeling, analysis and simulation of canal unit #1 tripping event on the COM electric system. In Proceedings of the Electric Power Research Institute Conference on Power Plant and Power System Training Simulators and Modeling, Fort Lauderdale, FL, March 1991.

[4.17] Ilić, M., Voltage-Related Power Systems Monitoring and Control: A Revised and Expanded Research Agenda, MIT Laboratory for Electromagnetic and Electronic Systems, WP91-001, March 1991.

[4.18] M. Ilić, Short-term energy management in a competitive utility environment. In Proceedings of the NSF Workshop on the Impact of a Less Regulated Utility Environment on Power System Control and Security, Madison, WI, pages 15-37, April 1991.

[4.19] Ilić, M., J.R. Lacalle-Melero, and W.J. Stobart, Final Report on the MIT Approach to Voltage Monitoring and Corrective Actions for the New England Power Pool, MIT Laboratory for Electromagnetic and Electronic Systems TR91-002, May 1991.

[4.20] N. D. Reppen and M. Ilić, Incipient System Voltage Collapse Analysis, in Final Report by Power Technologies, Inc., Schenectady, NY, June 1991.

[4.21] Ilić, M., Lacalle-Melero, J., Nishimura, F., Schenler, W., Short-Term Economic Energy Management in a Deregulated Environment: An Engineering Based Approach, MIT Laboratory for Electromagnetic and Electronic Systems WP91-003, June 1991.

[4.22] Ilić, M., J.R. Lacalle-Melero, and W.J. Stobart, Steady State Voltage Monitoring and Control, MIT Laboratory for Electromagnetic and Electronic Systems TR92-001, March 1992.

[4.23] Ilić, M., Fundamental Engineering Problems and Opportunities in Operating Power Transmission Grids of the Future, MIT Laboratory for Electromagnetic and Electronic Systems WP93-001, January 1993.

[4.24] Chapman, J.W and M. Ilić, Large-Signal Generator Control and its Impact on Improved Power Transfer Flexibility, Final Report ESEERCO Project EP90-45, September 1993.

[4.25] Graves, F.C., Ilić, M., Pricing of Electricity Network Services to Preserve Network Security and Quality of Frequency Under Transmission Access, Response to the Federal Energy Regulatory Commisssion, Docket No. RM93-19-000, November 1993.

[4.26] Ilić, M., Achieving Efficient, Reliable Electric Power Systems Under Deregulation, MIT Energy Laboratory Research, e-lab publication, pp. 1-3, December 1994.

[4.27] Ilić, M., Zobian, A. A., An Alternative Structure for preserving System Reliability and Facilitating Competitive Power Market, Response to the Federal Energy Regulatory Commission, Docket No. RM94-20-000, March 1995.

[4.28] Ilić, M. and F. Graves, Optimal Use of Ancillary Generation Under Open Access and Its Possible Implementation, MIT Laboratory for Electromagnetic and Electronic Systems, TR 95-006, August 1995.

[4.29] M.D. Ilić, Editorial, International Journal on Electrical Power Energy Systems, pages 1-2, Special Issue, September 1995.

[4.30] Ilić, M., F. Graves, L. Fink and A. DiCaprio, A Framework for Operations in Competitive Open Access Environment, MIT Energy Laboratory EL 95-003, October 1995.

[4.31] Ilić, M., Graves, F.C., Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Reply Comments to the Federal Energy Regulatory Commission, Docket No. RM95-7-001, October 1995.

[4.32] Ilić, M.D. and A. Zobian, Steady State Voltage Monitoring and Control, EPRI TR-105393, Project 2473-70, November 1995.

[4.33] M. Ilić, A possible framework for implementing energy transactions into real-time system operation and pricing for system services. In Proceedings of the EPRI Conference on Innovative Approaches to Electricity Pricing: Managing the Transition to Market-Based Pricing, La Jolla, CA, (Invited) March 1996.

[4.34] Ilić, M., Appendix B: Hierarchical Power Systems Control: Its Value in a Changing Industry, in Interconnected Operations Services: Defining System Requirements Under Open Access, Tampa Electric Company, March 1996.

[4.35] Lecinq, B. and M. Ilić, Peak-load Pricing for Transmission in a Deregulated Industry, MIT Energy Laboratory, EL 96-005, June 1996.

[4.36] Ilić, M., Benefits of Deregulation. But Who Pays for Reliability, MIT Energy Laboratory EL-96 004, June 1996.

[4.37] M. Ilić, A summer of shortage, Public Utilities Fortnightly, July 1996.

[4.38] M.D. Ilić and L. Hyman, Getting it right the first time: The value of transmission and high technologies, The Electricity Journal, 9:8-17, November 1996.

[4.39] Ilić, M., S.X. Liu, B.D. Eidson, C.N. Yu, E.H. Allen and P. Skantze, A Unified Approach to Real-Time Control, Accounting, and Supporting Policies for Effective Energy Management Under Competition, Final Report MIT Energy Laboratory EL 97-001, January 1997.

[4.40] Castillo, J. and M. Ilić, Assessment of Methods for Forecasting Electricity Demand, MIT Laboratory for Electromagnetic and Electronic Systems, WP 97-002, March 1997.

[4.41] Ilić, M., E.H. Allen and Z. Younes, Providing for Transmission in Times of Scarcity: An ISO Cannot Do It All, MIT Laboratory for Electromagnetic and Electronic Systems WP 97-003, May 1997.

[4.42] Ilić, M. and C.N. Yu, Algorithms and a User's Manual for Simulations of Automatic Generation Control (AGC) of Large Electric Power Systems, MIT Laboratory for Electromagnetic and Electronic Systems TR 97-003, May 1997.

[4.43] Younes, Z. and M. Ilić, Physical and Financial Rights for Imperfect Electric Power Markets, MIT Laboratory for Electromagnetic and Electronic Systems WP 97-005, May 1997.

[4.44] M. Ilić, Public comments to the task force on electric system reliability. In Secretary of Energy Advisory Board June, 1997.

[4.45] L. Hyman and M.D. Ilić, Scarce resource, real business or threat to profitability?, Public Utilities Fortnightly, October 1997.

[4.46] M. Ilić and L. Hyman, Incentives for transmission investments. In Proceedings of the EPRI Workshop on Power Delivery in the 21st Century, LaJolla, CA, November 1997.

[4.47] Ilić, M., Electric Power Transmission: Rationing a Limited Resource, MIT Energy Laboratory Research, e-lab publication, pp. 1-4, March 1998.

[4.48] Cardell, J., M. Ilić and R. Tabors , Integrating Small Scale Distributed Generation into a Deregulated Market: Control Strategies and Price Feedback, A Competitive Electricity Industry, EMF Report 15, Stanford, CA, Final Report to US Department of Energy, MIT TR 98-001, April 1998.

[4.49] M. Ilić, Benefits of deregulation: Who pays for reliability?, Energia, (Invited) September 1998.

[4.50] S. Connors and M. Ilić, Making electric power deregulation work. In Op/Ed, Boston Globe, page D7, December 1998.

[4.51] Ilić, M., Collison, K., Yoon, Y., Development of Recommendations for the Collection of Information, January 2000.

[4.52] Ilić, M., Information Technology for the New Competitive Electric Industry, MIT Energy Laboratory Research, e-lab publication, p. 8, March 2000.

[4.53] Yoon, Y.T., Arce, J.R., Collison, K., Ilić, M.D., Implementation of Cluster-based Congestion Management Systems, MIT E-Lab WP EL 00-001, May 2000.

[4.54] Saxena, A., Ilić, M., A Value-Based Approach to Voltage/Reactive Power Control, MIT E-Lab WP EL 00-004, May 2000.

[4.55] Describing Reliability of the Electric Power Industry During Its Transition into a Competitive Market that Includes Regulated Transmission Operations and other Service Relationships, Interim Report to the Energy Information Administration, DOE, July 2000.

[4.56] Yoon, Y.T., Collison, K., Arce, J.R., Ilić, M.D., Congestion Management Systems Methods: Comparison on 118 Bus System, MIT E-Lab WP EL 00-005, July 2000.

[4.57] Ilić, M., Fumagalli, E., Saxena, A., Arce, J.R., Reliability for Distributed Electric Power Systems of the Future: Interplay of Technology, Economics and Regulations, MIT E-Lab Technical Report, EL 00-004, August 2000.

[4.58] Yoon, Y.T., Collison, K., Arce, J.R., Ilić, M.D., Practical Implementation of a Congestion Cluster Pricing Method, MIT E-Lab WP EL 00-006, August 2000.

[4.59] M. Ilić, Eulogy for RTOs-Interregional is better, Public Utilites Forthnightly, 35352, October 2000.

[4.60] Skantze, P., Gubina, A., Ilić, M., Bid-based Stochastic Model for Electricity Prices: The Impact of Fundamental Drivers on Market Dynamics, MIT E-Lab report MIT-EL 00-004, November 2000.

[4.61] Ilić, M., Comments to the North American Electric Reliability Council" concerning the FERC Inquiry on Electric Reliability Issues for the Interstate Electric Transmission System, January 2001.

[4.62] Fumagalli, E., Black, J.W., Ilić, M., Vogelsang, I., A Reliability Insurance Scheme for the Electricity Distribution Grid, MIT E-lab MIT EL 01-001 WP, January 2001.

[4.63] Ilić, M., Skantze, P., Vusdhiphan, P., California Electricity Troubles: Is Massachusetts Next, MIT Tech Talk, January 2001.

[4.64] Ilić, M., Yoon, Y., RTO Filing, Regarding Order 2000 Compliance Filing - Docket No.RT01-000, January 2001.

[4.65] Ilić, M., Skantze, P., Visudhiphan, P., Refrain (Pianissimo): California here we come, Focus Section, Boston Globe, January 2001.

[4.66] M. Ilić, J.R. Arce, Y. Yoon, and E. Fumagalli, Assessing reliability in the new environment, The Electricity Journal, pages 55-67, March 2001.**

[4.67] MIT Energy Laboratory Research, e-lab publication, The Competitive Electric Power Industry: Making Decisions in an Uncertain Environment, Issue dedicated to M. Ilić and her research group, March 2001.

[4.68] Ilić, M., Collison, K., Yoon, Y., Development of Recommendations for the Collection of Information Describing Reliability of the Electric Power Industry During Its Transition into a Competitive Market that Includes Regulated Transmission Operations and other Service Relationships, Final Report to the Energy Information Administration, DOE, July 2001.

[4.69] M. Ilić, M. Calovic, N. Mijuskovic, R. Golob, A. Gubina, F. Gubina, and P. Skantze, A model-based approach to energy economics in the balkans: Effects of political and deregulation processes. In 1st Balkan Power Conference, Slovenia, September 2001.**

[4.70] M. Ilić, M. Calovic, and N. Mijuskovic, Energy infrastructure in Yugoslavia: The past and challenges ahead. In Proceedings of the 1st International Conference on Environmental Recovery in Yugoslavia, Belgrade, Yugoslavia, September 2001.

[4.71] Ilić, M., Designing the Competitive Electric Power Industry from the Wires Up, MIT Energy Laboratory Research, e-lab publication, p. 14, December 2001.

[4.72] Ilić, Marija D. , Model-based Protocols for the Changing Electric Power Industry, MIT, Cambridge, 2002.

[4.73] Ilić, Marija, The Future Power Grid, Cover story in Power Quality, pp. 14-17, 21, June 2002.

[4.74] S. Talukdar, J. Apt, M. Ilić, L. Lave, and M. Granger, Cascading failure: Survival versus prevention, The Electricity Journal, pages 25-31, November 2003.

[4.75] Marija Ilić, Principal Investigator, Institutional and Technological Architectures for the Distributed Power Industry of the Future, ABB Project Final Report, MIT, LFEE, December 2003.

[4.76] J. Apt, L. Lave, S. Talukdar, M. Granger, and M. Ilić, Electrical blackouts: A systemic problem, Issues in Science and Technology, January 2004.

[4.77] M. Ilić, Toward a multi-layered architecture of large-scale complex systems: Reliable and efficient man-made infrastructures. In Proceedings of the MIT/ESD Symposium, Cambridge, MA, March 2004.

[4.78] M. Ilić, Transmission system reliability and security under open access. In Proceedings of the IEEE PES GM, Boulder, CO, (Invited panel) June 2004., June 2004.

[4.79] Ilić, M., Toward a Multi-Layered Architecture of Large-Scale Complex Systems: The Problem of Reliable and Efficient Man-Made Infrastructures, ESD Student Seminars on Critical Infrastructures Presentation, MIT, Cambridge, MA, October 2004.

[4.80] Ilić, M., NETSS System for Solving Seams Problems: Illustrations on the NPCC Reduced Model, Invited NSF Presentation, October 2004.

[4.81] Ilić, M., Locational and Temporal Aspects of Electricity Markets, ESD Student Seminar Presentation, MIT, Cambridge, MA, November 2004.

[4.82] Ilić, M., Reactive Power Provision and Pricing in the Changing Electric Power Industry, NETSS Presentation at FERC, December 2004.

[4.83] Marija Ilić, Discussion of the paper by Michael Crew, reliability and service quality in network industries. In Conference in Honor of Paul Kleindorfer: Recent Advances in Operations and Risk Management, May 2005.

[4.84] Larson, R., Marks, D.H., Munther, D., Ilić, M., The 3 R's of Critical Energy Networks Reliability, Robustness and Resiliency, A White Paper Submitted to the MIT Energy Research Council, October 2005.

[4.85] Marija Ilić, The intellectual challenge behind bundling diverse energy systems of the future, MIT Engineering Systems Division (ESD) Newsletter, (invited). January 2006.

[4.86] M. Ilić and Le Xie, Overlapping decomposition of load flow Jacobian for static voltage stability indicator in interconnected power system. In Electricity Conference, Carnegie Mellon Univ., January 2006.**

[4.87] Seth Blumsack, Lester Lave, and Marija Ilić, A quantitative analysis of the relationship between congestion and reliability in electric power networks, The Electricity Journal, 28(4), January 2007.

[4.88] L. Xie and M. D. Ilić, Module-based modeling of cyber-physical power systems. In 2008 The 28th International Conference on Distributed Computing Systems Workshops, pages 513-518, June 2008.**

[4.89] Ilić, Marija (PI), NSF Final Report on R&D Needs for Future Cyber Physical Energy Systems, June 2009.

[4.90] Marija Ilić, 3Rs for power and demand: Dynamic monitoring and decision systems maximize energy resources, Public Utilities Fortnightly Magazine, December 2009.

[4.91] M. Ilić, Adaptive reliability revisited. In IEEE PES General Meeting, pages 1-2, July 2010.

[4.92] G. Andersson, M. D. Ilić, V. Madani, and D. Novosel, Network systems engineering for meeting the energy and environmental dream [scanning the issue], Proceedings of the IEEE, 99(1):7-14, January 2011.

[4.93] S. Pequito, Q. Liu, S. Kar, and M. D. Ilić, PMU placement to ensure observable frequency and voltage dynamics: A structured system approach. In 8th CMU conference On the Electricity Industry Data-Drive Sustainable Energy Systems, March 2012.**

[4.94] Marija D. Ilić and Qixing Liu, Toward a Systematic Framework for Deploying Synchrophasors and their Utilization for Improving Performance of Future Electric Energy Systems, Power Systems Engineering Research Center Project S-37 Final Project Report, May 2012.

[4.95] Junlakarn, S., and Ilić, M., Provision of Differentiated Reliability Services in Distribution Systems Based on Customer Preferences, Proceedings of the 2015 Technology, Management & Policy (TMP) Doctoral Consortium, 2015.

[4.96] Rhee, S., O'Fallon, C., Greer, C., Griffor, E., Wollman, D., Holmberg, D., Burns, M., Bushby, S., Gopstein, A., McDermott, T. and Tang, Y., 2019 Global City Teams Challenge: Smart and Secure Cities and Communities Challenge Expo, NIST Special Publication, 1900-204.

Invited Lectures

1. May 1981, "Complex Power-Complex Voltage for Electric Power Networks," Drexel University, Philadelphia, PA.
2. January 1982, "A New Approach to Load Flow Studies," Lehigh University, Bethlehem, PA.
3. March 1982, "Potential of Using the S-E Graph for Power Systems Monitoring," Pennsylvania Power and Light Co., Allentown, PA.
4. April 1982, "Recursive Formulae for Load Flow Computations," Cornell University, Ithaca, NY.
5. April 1982, "Theorems for Steady State Electric Power Networks," Cornell University, Ithaca, NY.
6. October 1982, "Theoretical Foundations of the Se-E Graph and Its Relations to the I-E Graph," Washington University, St. Louis, MO.
7. Spring 1983, "S-E Graph Based Adjoint Networks for Power Systems Studies," McMaster University, Hamilton, Canada.
8. April 1984, "Conditions for the Localized Response in Decoupled Voltage-Var Networks," University of Illinois, Urbana, IL.
9. May 1984, "Existence and Uniqueness of a Solution to the Reactive Power Problem," McGill University, Montreal, Canada.
10. Summer 1984, "Data Management for Reactive Power/Voltage Control," Central Illinois Light Co., Peoria, IL.
11. Summer 1984, "Floquet Theory Based Control of Switched Reluctance Motors," General Electric, Corporate R&D, Schenectady, NY.
12. Spring 1986, "Feedback Linearizing Control for Switched Reluctance Motors," General Electric, Corporate R&D, Schenectady, NY.
13. Fall 1986, "Automatic Voltage Control and Its Parallelism with the Automatic Generation Control," Leeds and Northrup Co., North Wales, PA.
14. Fall 1986, "Real Time Reactive Power Control," Pennsylvania-Jersey-Maryland Interconnection, Philadelphia, PA.
15. Spring 1987, "Reactive Power/Voltage Modeling and Control," MIT, Cambridge, MA.
16. May 1987, "Where Does the Power Industry Go From Here?" Power Industry Computation Conference, Montreal, Canada.
17. Summer 1987, "Reactive Power/Voltage Modeling and Control," University of California, Berkeley, CA.
18. July 1987, "Reactive Power: Basics, Problems and Solutions," IEEE Power Engineering Society, San Francisco, CA.
19. Fall 1987, "Numerical Algorithms for Large Scale Electric Power Systems," MIT, Cambridge, MA.
20. January 1988, "Open Control Theoretical Issues in the Large Scale Electric Power Systems," Rensselaer Polytechnic Institute, Troy, NY.
21. February 1988, "Reactive Power: Basics, Problems and Solutions," IEEE Power Engineering Society, New York, NY.

22. April 1988, "Numerical Algorithms for Simulating Very Large Dynamical Systems," Rensselaer Polytechnic Institute, Troy, NY.

23. May 1988, "Open Research Questions in Voltage Control Design," Grainger Lecture Series, Urbana, IL.

24. June 1988, "Coordinated Voltage Control on Large Interconnected Systems," Vattenfall, Stockholm, Sweden.

25. June 1988, "Pilot Point Based Voltage Control-Comparison of the Current Practice on the French System and the EPRI Supported Research in the U.S. for Automating Secondary Voltage Control," Electricite de France, Paris, France.

26. September 1988, "New Algorithms for Voltage Monitoring and Control," Power Technologies, Inc., Schenectady, NY.

27. November 1988, "Electric Power Systems Control and Operation: Present Practice and Future Directions," MIT, Cambridge, MA.

28. November 1988, "Review of the Available Monitoring and Control Tools for Voltage Problems," New England Electric System, Westboro, MA.

29. January 1989, "Were There Any Hidden Energy Reserves in Massachusetts Last Summer?" MIT, Cambridge, MA.

30. April 1989, "Monitoring and Control in Electric Power Systems," Water and Electricity Department, Abu Dhabi, United Arab Emirates.

31. April 1989, "Review of the Development on Voltage Monitoring and Control," New England Electric System, Westboro, MA.

32. September 1989, "New Approaches to Voltage/Reactive Power Control in Electric Power Systems," University of Tennessee, Knoxville, TN.

33. September 1989, "Operational Issues in Power Systems in 2000 and Beyond," NSF Workshop, Atlanta, GA.

34. October 1989, "Research Needs in Power Systems Dynamics and Control: Academic Perspective," MIT Workshop on Research Needs in Electric Power Systems, Cambridge, MA.

35. October 1989, "Voltage Problems: The New Operating Mode in Power Systems," MIT Workshop on Research Needs in Electric Power Systems, Cambridge, MA.

36. December 1989, "Advanced Controls in Electric Power Systems," New York Power Pool, Albany, NY.

37. December 1989, "New Controls for Electric Power Systems," General Electric Industry and Utility Sales, Schenectady, NY.

38. January 1990, "Potential Scenarios for Supercomputer Applications in Operating Electric Power Systems," Empire State Electric Energy Research Co., Albany, NY.

39. February 1990, "An Overview of the State-of-the-Art in Voltage Dynamics," North American Reliability Council, Atlanta, GA.

40. March 1990, "Needs for Future Research in Voltage Dynamics," American Electric Power Co., Columbus, OH.

41. April 1990, "Voltage Problem as a New Operating Mode in Electric Power Systems," North Carolina State University, Department of Electrical and Computer Engineering, Raleigh, NC.

42. November 1990, "Voltage Monitoring and Control of Electric Power Systems," MIT Workshop II on Power Systems, Cambridge, MA.
43. December 1990, "Global Research Agenda for Electric Power Systems at MIT," MIT Planning Workshop, Cambridge, MA.
44. June 1991, "MIT Method for Steady State Voltage Monitoring and Corrective Actions," Taiwan Power Co., Taiwan; also Korean Electric Power Co., Seoul, Korea, June. 1991
45. June 1991, "MIT Research in the Area of Power Systems Monitoring and Controls," Kansai Electric Power Co., Osaka, Japan.
46. June 1991, "Voltage Dynamics and Control," Seoul National University, Department of Electrical Engineering, Seoul, Korea.
47. June 1991, "Voltage Problems and Their Controls," Tokyo Electric Power Co., Tokyo, Japan.
48. November 1991, "Power Systems Monitoring and Control Research at MIT," MIT Workshop III, Cambridge, MA.
49. October 1992, "The Future of Energy Transmission in the US Electric Power: Switching to Semiconductors," MIT EECS Colloquium, Cambridge, MA.
50. November 1992, "The Impact of Advanced Technologies on Real Time Control of Power Systems," US Department of Energy Workshop, Denver, CO.
51. January 1993, "Planning and Operating Problems in the Newly Evolving Environment of the Electric Power Systems," MIT Planning Workshop, Cambridge, MA.
52. October 1994, "A Brief Survey of Present System-Wide Functions and Their Role in the Distributed Energy Market– Limits to Distribution," MIT/EUP Workshop on Transmission Distribution Operational Strategies for a Restructured Electric Industry, Cambridge, MA.
53. October 1994, "Optimal Strategies for Changing Power Industry," MIT/EUP Workshop on Transmission Distribution Operational Strategies for a Restructured Electric Industry, Cambridge, MA.
54. November 1994, "A Unified Approach to Real-Time Controls, Accounting and Supporting Policies for Effective Energy Management under Competition," New York Power Pool, Albany, NY.
55. December 1994, "Alternate Operational Strategies for Electric Utility Restructuring," Connecticut Energy Advisory Board, Hartford, CT.
56. December 1994, "Fundamental Problems and Opportunities in Operating Transmission Grid of the Future," University of Maryland Institute for Systems Research, College Park, MD.
57. December 1994, "Systems Engineering Design," University of Maryland, College Park, MD.
58. February 1995, "A Unified Approach to Dynamic Pricing Under Open Access," University of California, Berkeley, CA.
59. June 1995, "Power Pooling for Transmission and Ancillary Services: Balancing Efficiency and Comparability," Beaver Creek, CO.
60. July 1995, "A Unified Approach to Real-Time Controls, Accounting and Supporting Policies for Effective Energy Management under Competition," IEEE Task Force on Controls in the 21st Century," Portland, OR.
61. July 1995, "AGC in Competitive Environment," Workshop on Resource Scheduling and Generation Control, Hilton Head, NC.
62. October 1995, "A Unified Approach to Real-Time Controls and Accounting for Effective Energy Management under Competition," MIT, Cambridge, MA.

63. October 1995, "New Models for Representing Technical and Economic Processes of Energy Manangement Under Competition," INFORMS'95, New Orleans, LA.

64. October 1995, A Framework for Operations in Competitive Open Access Environment," MIT, Cambridge, MA.

65. September 1995, "R&D Perspective on Pricing Methodologies," ABB Power T D Company, Inc., Transmission Technology Institute, Raleigh, NC.

66. September 1995, "Role of an ISO in Supporting a Competitive Power Market Based on Bilateral Scheduling" (with Frank Graves), Workshop on Restructuring Electric Transmission, Beaver Creek, CO.

67. September 1995, "Trends in Activity-Based Costing," MIT Workshop on Corporate Planning and Technology Management for a Competitive Electric Industry Environment, Cambridge, MA.

68. January 1996, "A New Framework for Operations Planning under Open Access," Electricite de France, Paris, France.

69. January 1996, "Engineering vs. Market-based Pricing for the Interconnected Operating Services," Electric Utility Planning meeting, Cambridge, MA.

70. January 1996, "Open Problems in Using Flexible AC Transmission System (FACTS) Technologies" Electricite de France, Paris, France.

71. February 1996, "A Possible Framework for Operations Planning in a Changing Industry: Coordination vs. Competition," American Electric Power Co., Columbus, OH.

72. June 1996, "Deregulation in the Northeast of the United States," Energy Modeling Forum Stanford University Working Group 15, Washington, DC.

73. July 1996, "Flexible Planning for Power Transmission in a Competitive Industry," MIT, Cambridge, MA.

74. August 1996, "Peak Load Pricing for Transmission," Edison Electric Institute, Washington, DC.

75. August 1996, "Transmission Capacity in Electric Power Networks," 12th Power Systems Computation Conference, Dresden, Germany.

76. September 1996, "Getting it Right the First Time: Value of Transmission and High Technology," Transmission Pricing Conference, Denver, CO.

77. October 1996, "A Framework for Operations in Competitive Electric Power Industry," Cornell University, Ithaca, NY.

78. November 1996, "A Unified Approach to Real-Time Operations, Planning and Accounting Under Open Access," US Department of Energy, Washington, DC.

79. December 1996, "Hierarchical Control Structure and Voltage Control in FACTS Controlled Electric Power Systems," The Korean Electric Power Research Institute, Taejong, South Korea.

80. March 1997, "Power Systems Under Competition," University of Connecticut, Storrs, CT.

81. April 1997, "The Impact of Transmission Constraints on the Electricity Market," IEEE Mid-Hudson Section, Poughkeepsie, NY.

82. April 1997, "Transmission Provision at Times of Scarsity: An ISO Cannot Do it All," Center for Energy and Environmental Policy Research, Cambridge, MA.

83. June 1997, "Long-Term Investment Issues," International Business Communications, Washington, DC.

84. June 1997, "Public Comments to the Task Force on Electric System Reliability," Secretary of Energy Advisory Board, Washington, DC.

85. July 1997, "Vital Issues Panel," Sandia National Laboratory, Washington, DC.

86. October 1997, "Transmission Pricing in New England," Stanford Energy Modeling Forum, Stanford, CA.

87. April 1998, "Control Markets for Deregulated Electric Power Industry," Federal Energy Regulatory Commission, Washington, DC.

88. May 1998, "Transmisssion Constraints and Market Power," Stanford Energy Modeling Forum, Washington DC.

89. October 1998, "Measuring Power System Performance in the New Industry," PostISO Implementation Conference, Sacramento, California.

90. November 1998, "Electric Power Industry Restructuring: Engineering and Economics," IEEE Distinguished Lecturer, Orlando IEEE Chapter.

91. January 1999, "Critical Factors for Forming a Transmission Company," Alliance Transmission Owners, Washington DC, American Electric Power Headquarters.

92. January 1999, "Power Markets: Lessons for Internet," Internet Telephony Consortium Workshop, MIT, Cambridge.

93. February 1999, "On the objectives of transmission pricing," IEEE Panel, Winter Power Meeting, New York.

94. March 1999, "Some Obstacles to Moving Forward with Successful Deregulation of the Electric Power Industry," Federal Energy Regulatory Commission, Washington, D.C.

95. April 1999, "Research Challenges in Electric Power Systems," NSF Workshop on Innovations in Power Engineering Education and Research, National Science Foundation, Washington, DC.

96. June 1999, "Electric Power Restructuring in the United States," IEEE Distinguished Lecturer, French Chapter, Paris, France.

97. July 1999, "Measures for Comparing Performance of Regulated and Deregulated Electric Power Industries," Mini Symposium "Modeling and Computational Challenges in Deregulated Electricity Markets," 4th Conference on Industrial and Applied Mathematics, Edinburgh, Scotland.

98. July 1999, "On-line Voltage Regulation in New England," IEEE Panel, Edmonton, Alberta, Canada.

99. October 1999, "Strategic Directions in R&D to meet Future Demand; Setting R&D Prorities," Ontario Electricity Technology Forum: The New Reality, Toronto, Canada.

100. December 1999, "On Underlying Principles for Designing Standards in the New Electric Power Industry," NIST (National Institute of Standards Technology) Sponsored Workshop on "Challenges for Measurements and Standards in a Deregulated Electric Power Industry," Arlington, VA.

101. March 2000, The Role of IT in Competitive Electric Power Systems, MIT, Mechanical Engineering Department Series.

102. April 2000, "The Role of IT in the Electric Power Industry," Chicago, IL.

103. August 2000, "Integrating Electricity Markets for Wide Area Open Access," Workshop on Markets for Electricity, Economics and Technology (MEET): A Flow-based Paradigms for Systems Operation and Market Coordination," Stanford University, Palo Alto, CA.

104. September 2000, "Incentives for Transmission Investments: A Proposal for a New England Regional Transmission Organization," Orlando, FL, IEEE Distinguished Lecturer.

105. November 2000, A Strategic Systems for Electric Energy Technologies, NSF/DOE/EPRI Sponsored Workshop on Future Research Directions for Complex Interactive Electric Networks, Washington, D.C.

106. December 2000, Plenary: "The Role of Information Technology in the Electric Power Industry," PowerCon2000, Perth, Australia.

107. April 2001, Electric Power Networks and Data Networks: How Common are the Underlying Problems? EPRI/DOD Meeting, George Washington University, Washington, D.C.

108. June 2001, Change of Paradigms in Complexity and Interdependencies of Infrastructures, OSTP/NSF Meeting, White House, Washington, D.C.

109. June 2001, Decision Tools for Electric Transmission Service and Pricing: A Dynamic Porgramming Approach, EPRI/DOD Interactive Complex Networks Workshop, Washington, D.C.

110. September 2001, A Possible Transmission Market Design and Performance-Based Tariffs for Prudent Transmission Investments, Electric Power Market Performance Conference, Denver, CO.

111. September 2001, Valuing Transmission Service: Product Definition, Market Design and Software, Electricity Transmission Meeting, IIR, Arlington, VA.

112. October 2001, Protocols and Software for the Changing Electric Power Industry: Tradeoffs between T&D and DG, Alstom/MIT Meeting, Cambridge, MA.

113. November 2001, Model-Based Protocols for the Changing Electric Power Industry, EPP Department Talk, Carnegie Mellon University, Pittsburgh, PA.

114. November 2001, T&D Technologies—Systems Integration Opportunities and Challenges, Carnegie Mellon Workshop on Electricity Security and Survivability, Pittsburgh, PA.

115. November 2001, The Electricity Provision in the Changing Industry, WPI ECE Department Talk Series, Worcester, MA.

116. December 2001, Model-Based Protocols for the Changing Electric Power Industry, MIT LIDS Series Talk, Cambridge, MA.

117. January 2002, "A Proposal for an Inter-Regional Transmission Organization (IRTO)," IEEE Panel, New York City, NY.

118. February 2002, Panel on Electricity Restructuring, AAAS Meeting, Boston, MA.

119. 2003, A Multi-Layered Approach to Transmission Provision and Pricing in the Electric Power Networks, Institute for Mathematics and Applications (IMA), Univ. of Minnesota.

120. January 2003, Transmission Reliability Revisited: Provision and Pricing in the Evolving Electric Power Markets, EPRI/EMF Meeting, Palo Alto, CA.

121. February 2003, Preventing Blackouts in the Changing Electric Power Industry, ECE/CMU seminar Making Electric Power Systems both secure and Efficient: Protocols for Dynamic Energy Control (PDEC), CMU/EPP Seminar.

122. April 2003, Research on Complex Electric Power Networks, GAO presentation, CMU/ECE Meeting.

123. April 2003, Transformation of Electricity Markets: Value based transmission provision under open access, EPRI Research Advisory Committee (RAC) Meeting, EPP/CMU.

124. June 2003, Risk Management, Liquidity and the Value of Information Technology, North East Power Conference, Boston, MA.

125. October 2003, Dynamic Transmission Provision and Pricing for Electric Power Systems, EPNES NSF Workshop, Orlando, FL.

126. October 2003, Institutional and technological architectures for distributed power systems of the future, U.S. Department of Energy, and National Renewable Energy Laboratory, Next Generation Distribution System Visioning Workshop, Chicago, IL .

127. November 2003, Keynote: A Systematic IT Architecture for Efficient Electric Power Industry Under Restructuring: The Missing Mechanism, Its Implications and Possible Design, APSCOM-03, Hong Kong.

128. November 2003, Reliability in the Changing Industry, APSCOM-03 Tutorial (1 entire day), Hong Kong.

129. November 2003, Large-Scale Dynamic Network Systems Revisited: The Case of Electric Power Systems, NSF Workshop on Applied Math, Arlington VA .

130. November 2003, with Dr Poonsaeng Visudhiphan, An Agent-based Approach to Modeling Electricity Spot Markets, IMA Workshop, MN .

131. December 2003, Energy Industry Symposium, Cambridge, MA.

132. December 2003, Potential Implications of Making the Electric Power Network Secure/Reliable on Energy Use, MIT Energy Industry Symposium.

133. March 2004, Workshop on Control and Pricing in Communication and Power Networks, Potential Implications of Making the Electric Power Network Secure/Reliable on Energy Use, MIT .

134. March 2005, Reconciling Hierarchical Control and Open Access in the Changing Electric Power Industry, Proc of the IEEE International Conf on Networking, Sensing and Control, AZ.

135. May 2005, "Investment, Finance, and Safeguarding Public Interests in the Liberalized Electric Sector." Delft University, Netherlands.

136. September 2005, Preventing Future Blackouts by Means of Enhanced Control: From Complexity to Order, PSERC (Tele-Seminar).

137. November 2005, Critically Missing Derivatives in Today's Electricity Markets: A Possible Means of Relating Physical and Financial Signals, European Energy Forum, London, England.

138. November 2005, Preventing Future Blackouts by Means of Enhanced Control: From Complexity to Order, University of Liege, Belgium.

139. November 2005, Trading Commodities Delivered via Complex Physical Networks, Energy Forum, London, UK.

140. December 2005, Toward Value-based Energy Provision under Uncertainties, Cambridge Energy Research Associates.

141. 2006, "Reconciling Hierarchical Control and Open Access in the Changing Electric Power Industry." Large-Scale Dynamical Systems Workshop, Niagara-on-the-Lake, Ontario, June 18-20.

142. January 2006, "Software Needs and its Valuation in the Electric Power Industry." Carnegie Mellon University. Second Carnegie Mellon Conference in Electric Power Systems: Monitoring, Sensing, Software and Its Valuation for the Changing Electric Power Industry.

143. January 2006, Software Needs and its Valuation in the Electric Power Industry.

144. February 2006, "Technology Needs and Valuation in T&D," Florida Central University for Department of Energy (DoE) Panel.

145. May 2006, "Coherence of Technology and Regulation: The Case of Electricity." University of Paris Workshop on the NGI Project.

146. May 2006, "Software Needs and Its Valuation in the Electric Power Industry." University of Novi Sad, Serbia.

147. October 2006, "Engineering Electricity Services of the Future: From Hierarchical to Open Access Systems," IBM Talk, Yorktown, NY.

148. November 2006, Short-term and Long-Term Risks in Electricity Markets, Nice, France.

149. January 2007, "Engineering Electricity Services of the Future: From Hierarchical to Open Access Systems," IAP Courses on Sustainable Energy, MIT, Cambridge, MA.

150. February 2007, "Long-term Problems with, and Solutions for, Future Energy Systems," Northeastern University, Boston, MA.

151. February 2007, Unlocking Transmission Grid, Georgia Tech University Workshop.

152. October 2007, Keynote: "Engineering Future Energy Systems as Cyber-Physical Ecosystems," IEEE Systems, Man, and Cybernetics Conference (SMC2007), Workshop: eNetworks Cyberengineering: Infrastructures for Cyber-Physical Ecosystems, Montreal, Canada.

153. March 2008, On Different Architectures for Future Energy Systems, PG&E Industry Meeting, Protection and Control Industry Workshop.

154. March 2008, Why Details Matter in Future Energy Systems?, 4th CMU Electricity Conference.

155. May 2008, The Key Role of Network Systems Engineering in Reaching the Energy and Environment Dream, JPL.

156. May 2008, The Key Role of Network Systems Engineering in Reaching the Energy and Environment Dream, Caltech, ACM, Pasadena, CA.

157. September 2008, New Systems Control Problem Formulations for the Changing Electric Energy Industry, ETH, Zurich.

158. September 2008, Sensor-Based Modeling and Control for Future Electric Energy Systems, Smart Energy Strategies, Zurich, Switzerland.

159. October 2008, ECE Graduate Students Seminar Series, Carnegie Mellon University, The Role of Network Systems Engineering in Reaching the Energy and Environment Dream.

160. October 2008, Modeling and Control of Changing Electric Energy Systems, Korean Electric Power Co (KEPCO).

161. October 2008, Sensor-Based Modeling and Control for the Changing Electric Energy Systems, CEIC Talk.

162. October 2008, The Role of Network Systems Engineering in Reaching the Energy and Environment Dream, PSERC Talk.

163. October 2008, The Role of Network Systems Engineering in Reaching the Energy and Environment Dream, ECE Seminar Series, Carnegie Mellon University.

164. December 2008, New Systems Control Formulations for the Changing Electric Energy Industry, Delft University, The Netherlands.

165. December 2008, Research Opportunities and Results in EESG at Carnegie Mellon University, TenneT, The Netherlands.

166. 2009, The Challenge of Moving Forward, National Workshop on Future R&D Needs in Cyber Physical Energy Systems. http://www.ece.cmu.edu/ nsf/ cps/

167. February 2009, "Connecting the Dots: Sensing, Communications and Control for Enhanced Performance in Future Electric Energy Systems," UCLA HSSEAS.

168. February 2009, "Smart Regulation for Smart Grids: IT-enabled Rules, Rights and Responsibilities (3Rs) for Efficient Integration of New Energy Resources and Responsive Demand," CITRIS, University of California Berkeley.

169. March 2009, Dynamic Monitoring and Decision Systems (DYMONDS)—Interactive System-Wide Multi-Layered Multi-Directional Means of Integration of Components, NEMA Meeting, Seattle, WA.

170. March 2009, Integrating Distributed Energy Resources and Demand-Side Management: The Key Role of Dynamic Monitoring and Decision Systems (DYMONDS), i-PCGRID Workshop, Pacific Gas and Electric, San Francisco, CA.

171. March 2009, Integration, Innovation and Expansion in Undergraduate Education: Energy Systems, 25th ECEDHA Meeting, New Orleans.

172. March 2009, Vision for Dynamic Monitoring and Decision Systems, 5th CMU Conference on Electric Power Industry. http://www.ece.cmu.edu/ electricitycnoference/

173. April 2009, Integrating Distributed Energy Resources and Demand-Side Management: The Key Role of Dynamic Monitoring and Decision Systems (DYMONDS), Federal Energy Regulatory Commission (FERC).

174. May 2009, Expected University-Industry Work in the Area of Energy Systems, CCC Workshop, George Mason University. http://cps.isis.vanderbilt.edu/

175. May 2009, Integration, Innovation and Expansion in Future Cyber-Physical Energy Systems, CCC Workshop, George Mason University. http://cps.isis.vanderbilt.edu/

176. May 2009, New Systems Control Formulations for the Changing Electric Energy Industry, Los Alamos National Laboratory. http://cnls.lanl.gov/External/workshops_2009.php

177. May 2009, The Future of Electricity Systems: General Trends and Developments, "Managing the Increasing Dependence of the Electricity Infrastructure on ICT," Utrecht, The Netherlands.

178. July 2009, "A Novel Fault-Dependent-Time-Settings Algorithm for Overcurrent Relays," IEEE PES General Meeting, Calgary, Canada.

179. July 2009, "Model Predictive Dispatch in Energy Systems with Intermittent Resources," IEEE PES General Meeting, Calgary, Canada.

180. July 2009, "The Role of Dynamic Monitoring and Decision Systems (DYMONDS) in Enabling Adaptive Urban Energy Consumption," 12th ICTPI, Porto, Portugal.

181. September 2009, "Driving Efficiencies and Optimization: Maximizing the Operational Value of Smart Grid," GridWeek, Washington, DC.

182. November 2009, "Dynamic Monitoring and Decision Systems (DYMONDS) for Smart Grids: The Missing Link".

183. November 2009, "Dynamic Monitoring and Decision Systems (DYMONDS) and Smart Grids: One and The Same," EPRI Asset Management Meeting, Dallas, TX.

184. November 2009, "Dynamic Monitoring and Decision Systems (DYMONDS) and Smart Grids: One and The Same," Washington University, St. Louis, MO.

185. November 2009, "R&D Needs for Assessing and Managing Effects of Smart Grids on Reliability—Work in Progress," NERC Smart Grid Task Force (SGTF) Meeting Atlanta, GA.

186. November 2009, "Unbundling and Smart Grids—US Experience," UNECOM workshop on unbundling of energy companies Joint with Centre for European Policy Studies (CEPS), Brussels www.unecom.de.

187. 2010, Integration, Innovation and Expansion in Energy Systems Education, UPM, Madrid, Spain.

188. 2010, Making Transmission Smart: An Opportunity Which Should Not Be Missed, GridWeek.

189. January 2010, Dynamic Monitoring and Decision Systems (DYMONDS) for Smart Grids: The Missing Link, The IEEE Conference on Smart Grids.

190. February 2010, "Engineering Sustainable Electricity Services–The Key Role of Systems Thinking and Automation," Precourt Institute for Energy.

191. February 2010, Designing Sustainable Electricity Services—The Relevance of Systems Thinking and Automation, ESD Seminar, MIT.

192. April 2010, A Decision Making Framework and Simulator for Sustainable Electric Energy Systems, Boston University.

193. April 2010, Designing Sustainable Electricity Services—The Relevance of Systems Thinking and Automation, Cornell University Seminar.

194. April 2010, Discussion of the White Paper "Plug-in Electric Vehicle Infrastructure: A Foundation for Electrified Transportation," MITEI Transportation Electrification Symposium, Cambridge, MA.

195. April 2010, Engineering Sustainable Electricity Services–The Key Role of Systems Thinking and Automation, MIT Energy Club Talk, MIT, Cambridge, MA.

196. April 2010, Keynote: From Hierarchical to Open Access Electric Energy Systems: Challenges and Opportunities, 6th NSF/Northeast Control Workshop, John Hopkins University.

197. May 2010, Designing Sustainable Electricity Services—Key Role of Cyber-Physical Energy Systems, China Smart Grid Workshop, Chinese Academies of Science (organizer).

198. May 2010, Toward Sustainability Models of Electric Energy Systems: The Key Role of ICT Design—Smart Grid, The 13th Economics Conference on Infrastructures Delft, The Netherlands.

199. June 2010, A Proposal for Long-Term Energy Market Design: Interactive Planning Framework (IPF) in Support of Sustainable Technologies, FERC Conference.

200. June 2010, On Dynamic Programming (DP) Formulation of Least Cost Planning and an Example, FERC Conference.

201. June 2010, Toward Near Real-Time Fault Simulation, Detection and Testing in Smart Grids, DAC Workshop, Anaheim, CA.

202. June 2010, Unit Commitment for Sustainable Integration of Large-Scale Wind Power and Responsive Demand, Technical Conference on Unit Commitment Software Docket AD10-12 FERC, Washington, DC.

203. June 2010, Working on the Right Problem—Key to Bringing Value to the Sustainable Energy Future, 2nd Int'l Conference on Computational Sustainability, MIT, Cambridge, MA.

204. August 2010, Managing Reliability Amidst Major Infrastructure Change - What Do Utilities Need from Smart Grids, Hawaii Electric Co (HECO).

205. August 2010, Integration, Innovation and Expansion in Energy Systems Education, University of Hawaii, REIS.

206. October 2010, Achieving power system efficiency – survivability challenges, Smart Grid Survivability Workshop, Arlington, VA.

207. October 2010, The Challenges and Opportunities in Educating Electric Energy Systems, Dowd Fellowship Celebration, CMU.

208. October 2010, with Le Xie, Emission-Concerned Economic Dispatch with Intermittent Resources: Dependence on Methods Used, Joint Program Seminar.

209. November 2010, Transforming Education in Electric Energy Systems, Electrical and Computer Engineering department Head Association (ECEDHA) Energy Workshop.

210. December 2010, "(Incomplete) History of Power Systems Education and Research at MIT," ESRG Talk, MIT, Cambridge, MA.

211. December 2010, "Dynamic Monitoring and Decision Systems (DYMONDS) for Sustainable Energy Services," University of California, Santa Barbara.

212. December 2010, From Hierarchical to Open Access Electric Energy Systems: Challenges and Opportunities, Czech Republic Visit Presentation, MIT.

213. December 2010, MIT Power Systems History, ESRG Talk.

214. 2011, Complex Power Grids: From Grid-Centric Reliability To Meeting Grid-enabled Users Needs, CPS Annual Meeting, NSF. http://cps-vo.org/group/pimtg11

215. March 2011, Dynamic Monitoring and Decision Systems (DYMONDS) and Smart Grids: Key Enablers of Sustainable Energy Services, Cognitive Energy Systems Workshop, Hamilton, CA.

216. January 2011, "IT-enabled Electricity Services: The Missing Piece of the Environmental Puzzle," Issues in Technology and Policy, IAP Seminar Series, MIT.

217. February 2011, Engineering IT-Enabled Electricity Services, MITEI Seminar Series.

218. March 2011, "Fundamental Limits to Hierarchical Control in the Changing Industry and Smart Grids-Enabled Management of Emerging Behavior," 7th CMU Electricity Conference. www.ece.cmu.edu/ electriconf/

219. March 2011, "IT for Smart Grid Management and Distributed Generation," Executive Master's Program in Sustainable Energy Systems, MIT, Cambridge, MA.

220. March 2011, "Network Systems Engineering for Meeting Energy and Environmental Dream," Orange Institute, Sensor Networks as the New Growth Opportunity, Madrid, Spain.

221. March 2011, IT for Smart Grid Management and Distributed Generation, Executive Master's Program in Sustainable Energy Systems, MIT.

222. March 2011, Network Systems Engineering for Meeting Energy and Environmental Dream, Orange Institute, Sensor Networks as the New Growth Opportunity.

223. March 2011, What is Smart Grid? The Key Role of Smart Grid on the Way to Sustainable Solar-Electrical Energy Systems, Workshop on Photovoltaic Power Systems, Abu Dhabi, UAE.

224. April 2011, "On Technical and Economic Limits to Integrating Clean Energy Under Current Operating and Planning Industry Practices: The Need for Systematic IT-Enabled Policy Design," ERI e-Workshop.

225. April 2011, "The Key Role of Smart Grid on the Way to Sustainable Solar-Electrical Energy Systems," Workshop on Photovoltaic Power Systems, TU Delft, the Netherlands.

226. April 2011, Dynamic Monitoring and Decision Systems (DYMONDS): A Possible Mechanism for managing and Valuing Inter-Temporal Constraints under Uncertainties, MIT Electricity Student Research Group, MIT.

227. April 2011, The Key Role of Smart Grid on the Way to Sustainable Solar-Electrical Energy Systems, Workshop on Photovoltaic Power Systems, TU Delft, the Netherlands.

228. April 2011, Next Generation Infrastructures: Smart Grids, Opening Lecture, ICNSC-2011-8th IEEE Conference on Networking, Sensing and Control, Delft, The Netherlands.

229. April 2011, On Technical and Economic Limits to Integrating Clean Energy Under Current Operating and Planning Industry Practices: The Need for Systematic IT-Enabled Policy Design, ERI e-Workshop. http://www.src.org/program/eri/

230. May 2011, "Greening the Azores Islands: The Key Role of Dynamic Monitoring and Decision Systems (DYMONDS)," Green Islands Research Integration Workshop, MIT, Cambridge.

231. May 2011, Greening the Azores Islands: The Key Role of Dynamic Monitoring and Decision Systems (DYMONDS), Green Islands Research Integration Workshop, MIT, Cambridge.

232. August 2011, "Complex Power Grids: From Grid-Centric Reliability To Meeting Grid-enabled Users Needs," CPS PI Meeting, Panel on Energy, Arlington, VA.

233. September 2011, Toward Qualitative and Quantitative Sustainability Models of Electric Energy Systems, SAMSI Workshop. http://www.samsi.info/workshop/uq-engineering-and-renewable-energy-opening-workshopseptember-19-21-2011

234. October 2011, "Dynamic Monitoring and Decision Systems: The Missing Piece of the Smart Grid Puzzle," SAMSI Smart Grid Workshop.

235. October 2011, "Engineering IT-Enabled Electricity Services," Southern Cal Workshop, Caltech.

236. October 2011, Dynamic monitoring and Decision Systems (DYMONDS) for Sustainable Socio- Ecological Energy Systems (SEES): The Case of Low Cost Green Azores Islands, IBM.

237. October 2011, R&D challenges in distribution grids, electric vehicles, energy efficiency and storage, Hidrocantabrico Workshop, Oviedo, Spain. www.hcenergia.com

238. December 2011, "Corrective Resource Management for Voltage Support in Planning and Operation," FERC Staff Workshop on Voltage Coordination on High Voltage Grids Docket No. AD12-5-000, Washington DC.

239. 2012, "A review of today's operating and planning practice and critical need for innovation: The Case of Low-Cost Green Azores Islands," Guest Lecture in 16.S949 Special Subject: Computational Methods for Sustainability.

240. 2012, "Toward Large-scale Distributed Control for Tomorrow's Electricity Grid," Semi-Plenary talk, American Control Conference (ACC).

241. January 2012, Invited Lectures, The Tenth TCS Excellence in Computer Science Week (TECS Week), Pune, India. http://www.tcs-trddc.com/tecsweek/tecsweek_home.html

242. February 2012, "Engineering IT-Enabled Electricity Services: The Case of Low-Cost-Green Azores Islands," Carnegie Mellon University, ECE Graduate Student Seminar.

243. March 2012, "Software for Future Electric Energy Industry: The Major Challenge and Opportunity," NRC Commissioner Briefing.

244. April 2012, "Examples and Counterexamples of What Smart Grids Can and Can Not Do as Enablers of Sustainable Energy Systems," CNLS Annual Conference on Smart Grid, Santa Fe, NM.

245. May 2012, "Methods for Exploring Non-Transmission Solutions to Integrating Renewable Power," SRC ERI.

246. May 2012, "My Work on the Puzzle of Complex Electric Energy Systems," Women in Engineering Panel, IEEE T&D Conference and Exposition, Orlando, FL.

247. May 2012, "Software for Future Electric Energy Industry: The Major Challenge and Opportunity," NRECA Presentation.

248. May 2012, "Standards for Dynamics in Future Electric Energy Systems," PSERC White Paper Webinar.

249. May 2012, "Toward Assessing Relative Value of Central Generation and DERs," Federal Energy Regulatory Commission.

250. June 2012, "A Method for Assessing Relative Value of Central Generation and Distributed Energy Resources (DERs) in Distribution Feeders," Staff Technical Conference on Increasing Real-Time and Day-Ahead Market Efficiency through Improved Software (Docket No. AD10-12-003), Washington DC.

251. July 2012, "A Systems Approach to Teaching Electric Energy Systems," IEEE General Meeting, San Diego, CA, Session on Collaborative Education.

252. July 2012, "Toward a New IT Framework and Implementation Platform in Future Electric Energy Systems," The MIT-Stanford 'Game Changers' Conference II, Cambridge, MA.

253. July 2012, "Toward New Operating Framework in Future Electric Energy Systems," The MIT- Stanford 'Game Changers' Conference II, Cambridge, MA.

254. July 2012, "Ancillary Services in Systems with High Penetration of DERs," Super Session, IEEE PES General Meeting, San Diego.

255. August 2012, Keynote: "Toward IT-Enabled Power Systems: Large-scale distributed control for tomorrow's electricity grid," SGE-2012.

256. September 2012, Keynote: "Engineering IT-Enabled Sustainable Electricity Services: The Tale of Two Low-Cost Green Azores Islands," International Workshop on Energy Efficiency for a More Sustainable World, University of Azores, São Miguel Island, Azores, Portugal.

257. September 2012, "Toward IT-enabled Electricity Services: The Tale of Two Low-Cost Green Azores Islands," Energy Efficiency for a More Sustainable World (EEMSW) Sao Miguel.

258. October 2012, Keynote: "Structure-Based Modeling and Control of Future Electric Energy Systems," 2012 Symposium on Emerging Topics in Control and Modeling UIUC.

259. November 2012, "Engineering IT-Enabled Electricity Services: The Case of Low-Cost-Green Azores Islands," Carnegie Mellon University Dean's Council.

260. November 2012, "Making the Most out of Energy Technologies at Value," IEEE-USA Energy Policy Committee.

261. January 2013, "Dynamic Monitoring and Decision Systems for Sustainable Electric Energy Service," Harvard School of Engineering and Applied Science.

262. February 2013, "Dynamic Monitoring and Decision Systems (DyMonDS) for Sustainable Electric Energy Service," Great Lakes Energy Institute, Case Western Reserve University .

263. February 2013, "Dynamic Monitoring and Decision Systems (DyMonDS) Framework: Toward Making the Most Out of Available Electric Energy Technologies at Value," DIMACS Workshop on Energy Infrastructure: Designing for Stability and Resilience.

264. March 2013, "A Distributed Multiparty Power Flow Algorithm with Secure Exchange of Information," John Hopkins CPS Workshop .

265. March 2013, "Dynamic Monitoring and Decision Systems (DyMonDS) Framework for Integration of New Technologies at Value in Electric Energy Systems," US Department of Energy.

266. March 2013, "Dynamic Monitoring and Decision Systems (DyMonDS) Framework for Integration of New Technologies at Value in Electric Energy Systems," ARPA-E Grid .

267. May 2013, "Dynamic Monitoring and Decision Systems (DyMonDS) Framework Sustainable Electricity Services at Value," IBM.

268. May 2013, "Toward IT-Enabled End-to-End Smarter Electric Energy Systems," Smart Grid Development in US and China, US NAE.

269. May 2013, "The Role of Synchrophasors in Ensuring Reliable Power System Control," Thorp-Phadke Symposium, Virginia Tech.

270. June 2013, "Engineering IT-Enabled Electricity Services: The Tale of Two Low-Cost-Green Azores Islands," Greenmetrics ACM Workshop . www.sigmetrics.org/greenmetrics/2013/

271. June 2013, "The challenge of distributed plug-and play deployment in future electric energy systems," DAC2013 Workshop. www.sigmetrics.org/greenmetrics/2013/

272. June 2013, "Dynamic Monitoring and Decision Systems (DyMonDS) Framework for Integration of New Technologies at Value in Electric Energy Systems," International Council on Systems Engineering (INCOSE).

273. July 2013, "Sustainable Electricity Services Grid Alstom". www.alstom.com/usa/

274. July 2013, "Potential Role of Big Data in Power Systems Control," IEEE PES meeting.

275. September 2013, "Possible Framework for Integrating New Technologies at Value in Electric Energy Systems," Future Green Technologies: Challenges and Opportunities Workshop, Lehigh University. www.lehigh.edu/ ingrid/workshops/green_energy.html

276. September 2013, "Control Architectures for Future Power Grids," NITRD HICSS Working Group. https://www.nitrd.gov/

277. September 2013, "Smart Grids: End-to-End Cyber Physical Systems (CPS) for Sustainable Socio-Ecological Energy Systems," ISR Model-Based Systems Engineering Colloquium, University of Maryland. http://www.isr.umd.edu/sites/default/files/Marija_Ilic.pdf

278. October 2013, "The Role of T&D in Managing Technologies at Value Under Uncertainties," EISPC Washington DC.

279. November 2013, "Critical Assessment of R&D Needs for Future Electric Energy Systems–Why One Size no Longer Fits All?," NSF Workshop on Control, Communications and Computing.

280. November 2013, "Smart Grids: End-to-End Cyber Physical Systems (CPS) for Sustainable Socio-Ecological Energy Systems," Stanford University.

281. November 2013, "A Possible Framework to Integrating Intermittent Resources and Responsive Demand at Value," California ISO.

282. November 2013, "Things never quite turn out the way you plan it...maybe better?," ECE Women in Engineering (WIN), Carnegie Mellon University.

283. January 2014, "A possible framework for distributed (multi-layered) electric energy systems," 1st JST-NSF- DFG workshop on Distributed Energy Management Systems. http:// www.jst-nsf-dfg-distenergyman.org/

284. January 2014, "Smart Grids: End-to-End Cyber Physical Electric Energy Systems," Computational Science Ventures (CSV) Mini-Symposium. http://computefest.seas.harvard.edu/computational-science-ventures

285. February 2014, "The Challenges and Opportunities in Educating Electric Energy Systems," ISGT2014 Panel on Education Washington, DC 01/20/2014.

286. March 2014, "The Challenges and Opportunities in Educating Electric Energy Systems," IEEE ECE TF for Energy and Information.

287. April 2014, "Things never quite turn out the way you plan it...maybe better?," CPS2014 Week N2 Women Lunch Meet, Berlin, Germany.

288. April 2014, Keynote: "Integration of Heterogeneous Small Test Beds for Emulating Large-Scale Smart Power Grids: The Emphasis on Cyber Architectures," MSC PES2014 Workshop, Berlin, Germany.

289. July 2014, "Rethinking Data-Driven Software for Sustainable Electric Energy Services: From Data Gathering, through Learning and Decision Making," IEEE PES Panel on Challenges and Solutions of Big Data for Power System Operations.

290. July 2014, "Planning Value-Based Transmission," IEEE PES Panel on Transmission Planning.

291. July 2014, "Demonstration of a Possible Solution to the Seams Problem in the North-East (NE) U.S. System and Beyond," IEEE PES Panel on Seams.

292. August 2014, "Physics-Based Foundations for Cyber and Market Design in Complex Electric Energy Systems," Tutorial, IEEE CDC.

293. August 2014, "Next generation energy networks–Toward Making the Most Out of Available Electric Energy Technologies at Value," University of Gronningen, NL Energy Summer School.

294. August 2014, "Large-scale feedback distributed control for tomorrow's electricity grid," University of Gronningen, NL.

295. September 2014, "Research requirements for the evolving electric energy systems," DFG-round-table regarding the topic: "Tentative research topics in the frame of energy technology under economic and social aspects," Planning phase 2014, Head office, Deutsche Forschungsgemeinschaft Ahrstrasse 45, 53175 Bonn.

296. September 2014, "Transformational Education in Electric Energy Systems at ECE," CMU, 18-200.

297. October 2014, "Toward standards for sustainable electric energy systems: The basis for plug-and-play industry paradigm," IEEE Technology Time Machine, San Jose, CA.

298. October 2014, "Toward standards for dynamics in future electric energy systems: The basis for plug-and-play industry paradigm," LCCC Workshop Lund, Sweden. https://www.lccc.lth.se/media/LCCC2014/WorkshopNetwork/Ilic_LCCC_actual_Oct2014_actual_presentation.pdf

299. November 2014, Keynote: "The Role of Sensing, Estimation, and Communications in the Emerging Electric Energy Systems," IEEE Smart Grid Comm 2014 .

300. November 2014, "Toward standards for dynamics in future electric energy systems: The basis for plug-and-play industry paradigm," University of California, Berkeley.

301. November 2014, "Physics-based approach to plug-and-play in electric energy systems," University of Southern California.

302. January 2015, "Toward Dynamic Monitoring and Decision (DYMONDS)–Based Smart Distribution Systems," Electricite de Portugal (EdP).

303. February 2015, "Next Generation Energy Networks–Toward Making the Most Out of Available Electric Energy Technologies at Value," University of Illinois at Urbana Champaign Power Energy Conference.

304. April 2015, "A New Unifying Modeling for Scalable Simulation-based Test Beds of Future Electric Energy Systems: Smart Grid in a Room Simulator (SGRS) at CMU," JST-NSF-DFG Workshop on Distributed Energy Management Systems, NSF, Arlington VA. http://current.utk.edu/news/press-releases/curent-and-nsf-sponsor-2015-jst-nsf-dfg-rcn-workshop/

305. May 2015, "Bridging Gap between Modern Grid Design, Operations and Software," May 6, 2015, CMU Scott Institute Workshop.

306. May 2015, "Toward massive integration of power electronics control in future electric energy systems at value," Vasteras, ABB.

307. May 2015, Keynote: "Bridging Gap between Modern Grid Design, Operations and Software," FESC, Orlando FL. http://floridaenergy.ufl.edu/fesc-conferences/fesc-may-2015-workshop/

308. July 2015, "Bridging the Gap between Investment, Operations and Software for Sustainable Electric Energy Systems," IEEE PES Supersession.

309. May 2016, "Electricity Market Design–Multi-layered CPS Problem," IMA Workshop on Control at Large Scales: Energy Markets and Responsive Grids.

310. September 2016, "Toward a Unified Approach to Sustainable and Resilient Electric Energy Systems–Modeling, Control and Testbeds," Distinguished Lecturer, INECS-ID, IST, Lisbon, Portugal.

311. December 2016, "A structural approach to operations in the changing industry," PSERC Systems Stem Presentation, Atlanta GA.

312. January 2017, "Toward a Unified Approach to Sustainable and Resilient Electric Energy Systems–Modeling, Control and Testbeds," MIT (CMU) HARPS Workshop, Tokyo Japan.

313. February 2017, "Cyber-secure Energy Systems," Governor Summit on Energy & Infrastructure, Washington, DC. http://iogcc.ok.gov/governorenergysummit-2017

314. February 2017, "Future of Control Systems in Power Grids," MIT ILP General Electric visit.

315. February 2017, "Smart Grid in a Room Simulator (SGRS): Toward Plug-and-Play Design and Operation of Microgrids," Microgrid & DER Controller Symposium, MIT Cambridge.

316. May 2017, "Rethinking electric power systems-data-enabled social-ecological systems," Smart Grids and Energy Services. https://lidssmart2017.mit.edu/location/

317. May 2017, "The New Utility: Basic Enabler of Sustainable and Resilient Electric EnergyServices?," Smart Grids Seminars, Stanford University.

318. June 2017, "Cyber-security for Energy Systems," 2017 JST-NSF-RCN Workshop on Distributed Energy Management Systems, Japan, Tokyo.

319. July 2017, "Market Integration Between Wholesale and Retail Markets," Panel Session on Big Data Analytics for Electricity Markets, IEEE PES, Chicago, Illinois.

320. July 2017, "Scalable Electric Power System Simulator (SEPSS): Family of Interactive Models and Tools for Electric Energy Systems," 2017 SIAM Conference on Control and Its Applications, Pittsburgh, PA.

321. July 2017, "Challenges and opportunities in terrestrial electrical power systems," AIAA PE Forum.

322. September 2017, "Toward a Unified Modeling, Simulations and Control for Sustainable and Resilient Electric Energy Systems," MIT Workshop on Rethinking Modeling, Simulations for the Changing Electric Energy System.

323. September 2017, Plenary: "Towards assessing effects of new technologies in electric energy systems: New modular modeling and simulations paradigm," IEEE NAPS2017.

324. September 2017, "Toward a Scalable Electric Power System Simulator (SEPSS)," Technical Presentation at Workshop: Rethinking Modeling, Simulations and Control for the Changing Electric Energy Industry Massachusetts Institute of Technology, Cambridge, USA.

325. September 2017, "Toward a Numerical Simulation Framework for Electric Energy Systems," Technical Presentation at Workshop: Rethinking Modeling, Simulations and Control for the Changing Electric Energy Industry Massachusetts Institute of Technology, Cambridge, USA.

326. September 2017, "Illustration of SEPSS on MIT-LL Microgrids," Technical Presentation at Workshop: Rethinking Modeling, Simulations and Control for the Changing Electric Energy Industry, Massachusetts Institute of Technology, Cambridge, USA.

327. December 2017, "Opportunities and Challenges for Operating the Evolving Power Systems," MITei Annual Research Conference, MIT, Cambridge.

328. February 2018, 'Toward Sustainable and Resilient Puerto Rico Power Sector," Financial Oversight and Management Board for Puerto Rico (FOMB) meeting, NYC.

329. February 2018, "Interactive Planning Framework (IPF) for Assessing Future Power Grid Architectures in Puerto Rico," MIT internal meeting.

330. 2018, "Interactive Planning Framework (IPF) for Assessing Future Power Grid Architectures in Puerto Rico," MIT internal meeting.

331. May 2018, "Distributed Electric Power Systems Control," MITeiElectric Power Systems Workshop.

332. June 2018, "Transactive energy research at MIT," Transactive Energy Systems Conference (TESC)Cambridge, MIT.

333. August 2018, "Multi-Layered Interactive Energy Space Modeling for Near-Optimal Electrification of Aircraft Systems," AIAA/IEEE Electrical Aircraft Technologies Symposium (EATS?2018).

334. August 2018, "New Energy Space Modeling and Implications on Complexity of Decision Making and Control in Electric Energy Systems," Plenary Talk, MOPTA 2018, Lehigh University, Bethlehem, PA.

335. September 2018, "Enabling Prosumer-centric Transactive Energy Management," 36th USAEE/IAEE North American Conference, Washington DC, (with Jaddivada, R.).

336. September 2018, "Power Plant Hybridization for Efficient Electricity Markets," 36th USAEE/IAEE North American Conference, Washington DC (with Popli, N., O?Sullivan, F.).

337. September 2018, "Enabling prosumer participation in electricity markets," IWR, Heidelberg, Germany (with Jaddivada, R.).

338. September 2018, "New Energy Space Modeling and Implications on Complexity of Decision Making and Control in Electric Energy Systems," IWR, Heidelberg, Germany.

339. September 2018, "Toward Plug-and-Play Design and Operation of Microgrids," IWR, Heidelberg, Germany.

340. September 2018, "New energy space-based modeling and algorithms for next generation SCADA (DyMonDS)," Presentation at Siemens, Erlangen, Germany.

341. September 2018, "New Energy Space Modeling for Next Generation SCADA and Protocols for Electricity Service at Value," PSERC Webinar.

342. September 2018, "Teaching and Research in Changing Electric Energy Systems: Back to Principles and why Would it Help?," Plenary Talk, NAPS2018, Fargo, ND.

343. September 2018, "Exergy/Energy Dynamics-Based Modeling and Control for Stable and Feasible Aircrafts," TETS2018.

344. October 2018, "Scalable Electric Power System Simulator (SEPSS)," 8th IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT), Sarajevo, Bosnia and Herzegovina .

345. October 2018, "Rapid Automated Assessment of MicrogridPerformance Software System (RAMPS)," 8th IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT), Sarajevo, Bosnia and Herzegovina (with Jaddivada, R., Xia, M.).

346. November 2018, "Scalable Electric Power System Simulator (SEPSS): Implementation on MIT LLSC," Supercomputing Conference 2018, Dallas, TX.

347. November 2018, "Toward integrating operations, planning, markets and cyber-security in (distributed) energy systems," The MITei EPS Fall Workshop; MIT, Cambridge, MA.

348. November 2018, "The Future of Electric Power Grid," Future of ECE Symposium, ECE Department, North Carolina State University.

349. November 2018, "Multi-layered modeling, simulation and control for large-scale complex systems," Control@MIT, Cambridge, MA.

Postdoctoral Associates

Milos Cvetkovic, Assistant Professor, TU Delft University.

Kevin Bachovchin, Engineer, Bettis Atomic Power Laboratory.

Nipun Popli, Postdoctoral Associate, MIT Energy Initiative.

Doctoral Theses Supervised

- Taylor, David G, "Control of Nonlinear Systems with Application to Electrical Machines and Robotic Manipulators," December 1987 (University of Illinois)
- Christensen, J, "Secondary Voltage Control Using Partial Information Structures," December 1987 (University of Illinois)
- Crow, M, "Systems of Differential/Algebraic Equations with Applications to Power System Transient Stability Analysis," September 1989 (University of Illinois)
- Mak, Fong K., "Modeling and Control of Slow Voltage Dynamics in Electric Power Systems," September 1989 (University of Illinois)
- Doerry, N, "Advanced Numerical Methods for Simulating Nonlinear Multirate Lumped Models (co-supervised with J. Kirtley," June 1991 (Ocean Engineering Department, MIT)
- Amy, J, "Composite System Stability Methods Applied to Advanced Shipboard Electric Power Systems (co-supervised with J. Kirtley," June 1992 (Ocean Engineering Department , MIT)
- Liu, X, "Structural Modeling and Hierarchical Control of Large-Scale Electric Power Systems," June 1994 (Mechanical Engineering Department, MIT)
- Eidson, D, "Estimation and Hierarchical Control of Market-driven Electric Power Systems," September 1995 (MIT)
- Chapman, J, "Power System Control for Large-Signal Stability: Security, Robustness and Transient Energy," June 1996 (MIT)
- Zobian, A, "A Framework for Pricing Transmission and Ancillary Services in Competitive Electric Power Markets," June 1996 (MIT)
- Cardell, J, "Integrating Small Scale Distributed Generation into a Deregulated Market: Control Strategies and Price Feedback (Best Thesis award) (co-supervised with R. Tabors)," September 1997 (TMP, MIT)
- Allen, E, "Stochastic Unit Commitment for a Deregulated Electric Power Industry," June 1998 (MIT)
- Yu, Chien-Ning, "Hierarchical congestion management for a deregulated power industry," August 1999 (Mechanical Engineering Department, MIT)
- Millis, Kathryn, "Distributed Measures of Solution Existence and Its Optimality in Stationary Electric Power Systems: Scattering Approach," August 1999 (MIT)
- Arce, Rafael Jose, "Transmission Reliability Assessment in a Competitive Electric Energy Industry (co-advised with F.F. Garces)," February 2001 (Universidad Nacional de San Juan, Argentina)
- Skantze, P, "A Fundamental Approach to Valuation, Hedging and Speculation in Deregulated Electricity Markets," June 2001 (EECS, MIT)
- Yoon, Yong Tae, "Electric Power Network Economics: Designing Principles for a For-Profit Independent Transmission Company and Underlying Architectures for Reliability," June 2001 (EECS, MIT)

- Visudhiphan, Poonsaeng, "An Agent-Based Approach to Modeling Electricity Spot Markets," May 2003 (EECS, MIT)
- Botterud, Audun, , "Modeling and Analysis of Investment Dynamics in the Changing Electric Power Industry (co-advised with Trodheim)," June 2005 (NTNU)
- Minoia, Anna, "Reference Transmission Network Concept in an Oligopolistic Electricity Market: a Game Theory Approach (co-Advisor: Michele Trovato)," June 2005 (Dipartimento di Elettrotecnica ed Elettronica , Politecnico di Bari)
- Black, Jason, "Technical and Regulatory Methods for Inducing Price Responsiveness in Regulated Electricity Markets," June 2005 (ESD/TMP, MIT)
- Elizondo, Marcelo , "Fast Control of Electric Power Systems and Market Design for Their Valuation (co-advised with F.F. Garces)," June 2009 (Universidad Nacional de San Juan, Argentina)
- Liu, Juhua, "Advanced Control of Power Systems (co-advised with Bruce Krogh)," December 2009 (Carnegie Mellon University (Pittsburgh, PA))
- Xie, Le, "A Framework for Distributed Decision Making in Electric Energy Systems with Intermittent Resources," December 2009 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Houwing, Michiel, "Smart Heat and Power Creating Economic Value with Micro Cogeneration through Intelligence (EPP Visiting Student 2007-2008, Delft University of Technology, Netherlands)," February 2010 (Carnegie Mellon)
- Prica, Marija, "An Algorithmic Interactive Planning Framework in Support of Sustainable Technologies," May 2010 (Carnegie Mellon University (Pittsburgh, PA))
- Zhang, Yi, "Toward Smarter Protection in Power Grids: Applications of Support Vector Machines (SVM) and Communications to Protection Relays (co-advised with Ozan Tonguz)," June 2010 (Carnegie Mellon University (Pittsburgh, PA))
- Liao, Huaiwei, "Measuring Cascading Risks in Large Scale Power Grids (co-advised with Sarosh)," June 2010 (Carnegie Mellon University (Pittsburgh, PA))
- Blood, Ellery, "Enhancing Electric Power System Estimation (co-advised with Bruce Krogh)," May 2011 (Carnegie Mellon University (Pittsburgh, PA))
- Wu, Zhyiong (Richard), "Stratum Electricity Markets: Toward Multi-Temporal Distributed Risk Management for Sustainable Electricity Provision," May 2012 (EPP Department, Carnegie Mellon University (Pittsburgh, PA))
- Masoud H, "Making the Most out of Distributed Generation without Endangering Normal: A Model-Based Technical-Policy Approach (co-advised with Joao Pecas Lopes, UFP, Porto) ," September 2012 (EPP, Carnegie Mellon University (Pittsburgh, PA))
- Abdel-Karim, Noha, "Multi-Temporal Decomposed Wind and Load Power Models for Electric Energy Systems," September 2012 (Carnegie Mellon University (Pittsburgh, PA))
- Joo, Jhi-Young, "Adaptive Load Management: Multi-Layered and Multi-Temporal Optimization Of The Demand Side In Electric Energy Systems," May 2013 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Verzijlbergh, Remco A, "Integration of EVs at Value," May 2013 (TPM, TU Delft)
- Cvijic, Sanja, , "Computer Methods for Detecting and Managing Parallel and Loop Flows in Large Electric Power Systems," May 2013 (Carnegie Mellon University (Pittsburgh, PA))
- Cvetkovic, Milos, "Power-Electronics-Enabled Transient Stabilization of Power Systems Submitted," May 2013 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))

- Weng, Yang, "Statistical and Intertemporal Methods Using Embeddings for Non-linear AC Power System State Estimation (co-advised with Rohit Negi)," August 2013 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Liu, Qixing, "A Large-Scale Systems Framework for Coordinated Frequency Control of Electric Power Systems," December 2013 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Donadee, Jonathan, " Optimal Use of Energy Storage for Arbitrage and Ancillary Services," May 2015 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Bachovchin, Kevin D, "Electromechanical Design and Applications in Power Grids of Flywheel Energy Storage Systems (co-advised with Jim Hoburg)," May 2015 (ECE, Carnegie Mellon University (Pittsburgh, PA))
- Hsu, Andrew, "A Network Graph-based Framework for Modeling, Calculating and Controlling Feasible AC Electric Power Delivery," October 2015 (Carnegie Mellon University (Pittsburgh, PA))
- Junlakarn, Siripha, "Retail Market Mechanism in Support of Differentiated Reliable Electricity Services," December 2015 (EPP Department, Carnegie Mellon University (Pittsburgh, PA))
- Baros, Stefanos, "Distributed Control for Wind Farm Power Output Stabilization and Regulation," May 2016 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Tee, Chin Yen, "Market Design for the Future Electricity Grid: Modeling Tools and Investment Case Studies," May 2017 (EPP Department, Carnegie Mellon University (Pittsburgh, PA))
- Popli, Nipun, "Multi-layered Energy Conversion and Frequency Control in Complex Electric Power Systems," May 2017 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Prada, Jose Fernando, "Ensuring the Reliable Operation of the Power Grid: State-Based and Distributed Approaches to Scheduling Energy and Contingency Reserves," September 2017 (EPP Department, Carnegie Mellon University (Pittsburgh, PA))
- Rupamathi Jaddivada (MIT), "A unified modeling for control of generalized reactive power dynamics in electric energy systems", August 2020 (MIT, EECS).
- Ana Jevtic (MIT,EECS), "Cyber-attack Detection and Resilient State Estimation in Power Systems", May 2020.
- Xia Miao (MIT), "Distirbuted Control for Autonomous Energy Systems", December 2019 (MIT, EECS)

Master's Theses Supervised

- Varghese, Matthew, "Participation factors for governor power flow algorithms," 1983 (Electrical Engineering, Drexel University)
- Schulz, D, "An Estimate of the Q-V Decoupling Error," September 1984 (Cornell University)
- Dobraca, F, "A Novel Approach to the System-Wide Protection of Large Power Systems," September 1986 (University of Illinois)
- Crow, M, "Transient Stability Simulation by Waveform Relaxation Techniques," September 1986 (University of Illinois)
- Mak, Fong K., "Instantaneous Torque Control of Switched Reluctance Motors Using Floquet Theory," September 1986 (University of Illinois)
- Shanahan, P, "Approximate Methods for Voltage Monitoring and Control in Electric Power Systems," December 1987 (University of Illinois)

- Rayes, A, "Numerical Issues in Studying a Linear Dynamical Model of a Realistic Power Electronic Circuit," May 1988 (University of Illinois)
- Stobart, W, "Using Reactive Power Reserves for Hierarchical Control of Electric Power Systems," June 1990 (Mechanical Engineering Department, MIT)
- Kiryaman, T, "Nonlinear Analysis and Control of Switched-Mode DC to DC Converters," February 1991 (Nuclear Engineering Department, MIT)
- Millis, Kathryn, "Modelling and stability of parallel converters," June 1991 (MIT)
- Lim, K, "Coordination and Control Logic Design for Slow Voltage Control Devices in Electric Power Systems," September 1991 (Mechanical Engineering Department, MIT)
- Tolikas, M, "The Application of Homotopy Methods in the Analysis of Electric Power Systems," June 1992 (MIT)
- Nishimura, F, "Benefit Optimization of Electric Energy Exchange in a Deregulated Multi-Utility Environment (co-supervised with R. Tabors)," June 1992 (TPP, EECS , MIT)
- Jaber, Z, "Computer Applications in Power Systems (co-supervised with M. Yehia)," September 1992 (American University of Beirut, Lebanon)
- Lacalle-Melero, J, "Short Term Stability Analysis of Electrical Energy Markets Under the Real Time Pricing," February 1993 (MIT)
- Lasota, C, "Reactivity Estimation and Validation for the Control of Reactor Neutronic Power (co-supervised with J. Bernard and D. Lanning)," June 1993 (Nuclear Engineering Department, MIT)
- Chapman, J, "Feedback Linearizing Generator Excitation Control for Enhanced Power System Stability," September 1993 (MIT)
- Allen, E, "Effects of Torsional Dynamics on Nonlinear Generator Control," February 1995 (MIT)
- LaWhite, N, "Vector Calculus of Periodic Non-Sinusoidal Signals for Decomposition of Power Components in Single and Multiphase Circuits," June 1995 (MIT)
- Yu, Chien-Ning, "Real Power and Frequency Control of Large Electric Power Systems under Open Access," June 1996 (Mechanical Engineering Department, MIT)
- Cordero, R, "Estimation of Transmission Losses in a Changing Electric Power Industry," June 1996 (MIT)
- Zobian, A, "A Framework for Cost-based Pricing of Transmission and Ancillary Services in Competitive Electric Power Markets," June 1996 (MIT)
- Lecinq, B, "Peak-load Pricing for Transmission in a Deregulated Electric Utility Industry," June 1996 (Civil Engineering Department, MIT)
- Kuan, J, "Optimal Power Flow with Price-Elastic Demand," September 1996 (MIT)
- Yoon, Yong Tae "Enhancement of Electric Power Systems Operation Using FACTS Devices," February 1997 (MEng, EECS, MIT)
- Castillo Martinez, J, "How to Make Electric Power Markets Work: The Case of Central America," June 1997 (MIT)
- Lerner, P, "On the Value of Transmission Systems under Open Access: Incentives for Investment," June 1997 (MIT)
- Macan, E, "Peak-Load Pricing for the IEEE Reliability Test System," June 1997 (MEng, EECS, MIT)

- Younes, Z, "Deregulation of the Electric Power Industry: The Impact of Transmission on Market Imperfections," February 1998 (Civil Engineering Department, MIT)
- Skantze, P, "Closed-loop Market Dynamics in a Deregulated Electric Power Industry," February 1998 (MIT)
- Shalafi, A, "Available Transmission Capability in Deregulated Electric Power Industry: A Critical Assessment," June 1998 (MIT)
- Alumran, A, "Available transfer capability for electric power markets: a critical appraisal," June 1998 (MEng, EECS, MIT)
- Visudhiphan, P, "A Dynamic Model of the Electricity Generation Market," September 1998 (MIT)
- Leotard, J, "Transmission Pricing and Incentives for Investments under Uncertainty in the Deregulated Industry," February 1999 (TPP, Civil Engineering, MIT)
- Prada, J, "Valuation of Operating Reserve in Power Systems," June 1999 (TPP, EECS, MIT)
- Chalermkraivuth, Charles, "Distributed Generation: The Strategies and Decision Criteria of Market Participants," February 2001 (TPP, ESD, MIT)
- Tsuchida, Bruce, "Design of an Information Entity-The InfoCo-for the Electric Power Industry Under Restructuring," June 2001 (TPP, ESD and EECS, MIT)
- Gozum, Ozge Nadia, "Decision Tools for Transmission Service and Pricing: A Dynamic Programming Approach (Gullemin Prize Thesis Award for best EECS thesis)," June 2001 (EECS, MIT)
- Collison, Kenneth, "A Practical Approach to Optimal Pricing and Implementation of Inter-regional Transactions in the Deregulated US Electricity Market," June 2001 (TPP, ESD, MIT)
- Raikar, Santosh, "Interruptible Physical Transmission Contracts for Congestion Management," July 2001 (TPP ESD, MIT)
- Wagner, Michael, "Hedging Optimization Algorithms for Deregulated Electricity Markets," June 2001 (MEng, EECS, MIT)
- Watz, Jill, "The Role of Government in Facilitating Customer Choice in the Electric Power Industry Under Restructuring," February 2002 (TPP, ESD, MIT)
- Gatterbauer, Wolfgang, "Interdependence of Electricity Market Characteristics and Bidding Strategies of Power Producers," May 2002 (EECS, MIT)
- Sivakumar, I, "Stochastic optimization of electricity transmission: dynamic programming algorithms under uncertainties," June 2002 (EECS, MIT)
- Amini, M, "An Aggregated Framework for Electric Vehicle's Charging Demand as Dispatchable Loads and Effects of EVs on Network Loss Minimization," July 2005 (Carnegie Mellon University (Pittsburgh, PA))
- Thatte, Anupam, "MS Course Option student," December 2005 (Carnegie Mellon University (Pittsburgh, PA))
- Prica, Marija, "Transmission Planning in the Changing Electric Power Industry (co-advised with Prof. D. Popovic) ," June 2006 (University of Novi Sad)
- Liu, Juhua, "Mid-term Instabilities in Electric Power Systems (co-advised with Bruce Krogh)," June 2007 (ECE, Carnegie Mellon University (Pittsburgh, PA))
- Zhang, Yi, "Smart Relays," January 2009 (Carnegie Mellon University (Pittsburgh, PA))

- Rotering, Niklas, "Optimal Plug-in Electric Vehicle Charge Control in Deregulated Electricity Markets," March 2009 (ETH, Zurich and CMU, jointly)
- Cvijic, Sanja, "A Modeling Framework for Capturing Parallel Flows and Effects of Bilateral Contracts in an Evolving Industry," May 2010 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Bachovchin, Kevin, "Magnetic Fields and Forces in an Ambient Temperature Passive Magnetically Levitated Bearing System," December 2011 (ECE Department, Carnegie Mellon University (Pittsburgh, PA))
- Dowdle, Aidan, "A Requirements Analysis Methodology for Turboelectric Aircraft," June 2017 (MIT)
- Davuluri, Sruthi, "Decentralized Economic Dispatch for Radial Electric Distribution Systems", June 2019 (MIT, TPP).
- Lauer, Michelle, "Real-Time Household Energy Prediction: Approaches and Applications for a Blockchain-Backed Smart Grid", February 2019 (MIT, EECS).
- Nguyen, Edward, "Using Intelligent Load Adjustment to Find Feasible Power Flow in Emergency Situations", August 2020 (MIT, EECS).
- Agarwal, Janak, "Distributed Estimation and Energy space model validation of dynamic energy components in a commercial HVAC system", August 2020 (MIT, EESG).
- Partha, Mira, "Detection of Topologically Distributed Anomalies inElectric Power Systems Using the Hierarchical MAC Algorithm", May 2020 (MIT, EECS).