

-AACLab Smart Grid Publications

Journals:

1. A. Kiani, A.M. Annaswamy, and T. Samad, "[A Hierarchical Transactive Control Architecture for Renewables Integration in Smart Grids: Analytical modeling and stability.](#)" *IEEE Transactions on Smart Grid*, Special Issue on Control Theory and Technology, 5(4):2054–2065, July 2014.
2. A. Kiani and A.M. Annaswamy. "[A Dynamic Mechanism for Wholesale Energy Market: Stability and Robustness](#)", *IEEE Transactions on Smart Grid*, 5(6):2877-2888, November 2014.
3. A. Kiani and A. M. Annaswamy. "[Equilibrium in Wholesale Energy Markets: Perturbation Analysis in the Presence of Renewables](#)", *IEEE Transactions on Smart Grid*, 5(1):177–187, Jan 2014.
4. Y. Sharon, A. M. Annaswamy, A. Motto, and A. Chakraborty, "[Adaptive Control for Regulation of a Quadratic Function of the State.](#)" *IEEE Transactions on Automatic Control*, 59(10):2831-2836, October 2014.
5. J. Hansen, J. Knudsen and A. M. Annaswamy. "[A Dynamic Market Mechanism for Integration of Renewables and Demand Response.](#)" *IEEE Transactions on Control Systems Technology*, vol. 24, No. 3, 2016.
6. D. Shiltz, M. Cvetkovic, and A.M. Annaswamy, "[An Integrated Dynamic Market Mechanism for Real-time Markets and Frequency Regulation](#)", *IEEE Transactions on Sustainable Energy*, vol. 7, No. 2, 2016.
7. P. Wood, D. Shiltz, T. Nudell, A. Hussain, and A.M. Annaswamy, "A Framework for Evaluating the Resiliency of Dynamic Real-Time Market Mechanisms," *IEEE Transactions on Smart Grid*, Special Issue on Resilience, 7(6):2904-2912, 2016.
8. A.M. Annaswamy, A.R. Malekpour, and S. Baros, "Emerging Research Topics in Control for Smart Infrastructures," *Annual Reviews in Control*, Volume 42, 2016, Pages 259–270; <http://authors.elsevier.com/sd/article/S1367578816300633>.
9. N. Nandakumar and A.M. Annaswamy, "Computational Models of Natural Gas Markets for Gas-Fired Generators," *IEEE Trans. Smart Grid* (to be submitted), 2017.

Books and Book Chapters:

10. M. Kezunovic, A.M. Annaswamy, I. Dobson, S. Grijalva, D. Kirschen, J. Mitra, and L. Xie, "ENERGY CYBER-PHYSICAL SYSTEMS: Research Challenges and Opportunities," NSF Report, Aug. 2014.
11. A.M. Annaswamy (Project Lead), "[Vision for Smart Grid Control: 2030 and Beyond.](#)" (Eds. M. Amin, A.M. Annaswamy, C. DeMarco, and T. Samad), IEEE Standards Publication, June 2013.
12. A. Kiani and A.M. Annaswamy, "[Wholesale Energy Market in a Smart Grid: A Discrete-Time Model and the Impact of Delays.](#)" In *Control and Optimization Methods for Electric Smart Grids*, Eds: A. Chakraborty and M. Ilic, Springer-Verlag, NY, 2012.

Newsletter:

13. A.M. Annaswamy, T.R. Nudell, "Transactive Control – What's in a Name?," *IEEE Smart Grid Newsletter*, September 2015.

Conferences:

14. T.R. Nudell, M. Brigone, M. Robba, A. Bonfiglio, and A.M. Annaswamy, "A Dynamic Market Mechanism for Combined Heat and Power Microgrid Energy Management," *IFAC Congress*, Toulouse, France, 2017 (submitted).
15. M.J. Garcia, T.R. Nudell, and A.M. Annaswamy, "A Dynamic Regulation Market Mechanism for Improved Financial Settlements," *American Control Conference*, Seattle, WA, 2017 (submitted).
16. J. Romvary and A.M. Annaswamy, "Multi-agent Coordination in Dynamic Networks," *55th IEEE Conference on Decision and Control*, Las Vegas, NV, December 2016.
17. A. M. Annaswamy, A. Hussain, A. Chakraborty, M. Cvetkovic, "[Foundations of Infrastructure CPS](#)", *American Control Conference*, Boston, MA, July 2016.

18. D. Shiltz, A. Annaswamy, "[A Practical Integration of Automatic Generation Control and Demand Response](#)", IEEE American Control Conference, Boston, MA, <http://dspace.mit.edu/handle/1721.1/99356>
19. J. Romvary, A.M. Annaswamy, "A Contraction Approach to Modular System Design with Communication Topologies", IEEE American Control Conference, Boston, MA, July 2016.
20. M. Cvetkovic, N. Nandakumar, D. Shiltz, A.M. Annaswamy, "Computational Modeling for Resilient Electricity-Gas Infrastructures", Trans-Atlantic Infraday Conference, Washington DC, October 2015.
21. N. Nandakumar, A. M. Annaswamy, M. Cvetkovic, "[Natural Gas-Electricity Market Design Utilizing Contract Theory](#)", IEEE Power and Energy Society General Meeting, Poster session, July 2015.
22. M. Cvetkovic, A. M. Annaswamy, "[Coupled ISO-NE Real-time Energy and Regulation Markets for Reliability with Natural Gas](#)", IEEE Power and Energy Society General Meeting, July 2015.
23. S. Jenkins, A.M. Annaswamy, J. Hansen, J. Knudsen, "[A Dynamic Model of the Combined Electricity and Natural Gas Markets](#)," IEEE PES Innovative Smart Grid Technologies Conference, Feb, 2015.
24. J. Hansen, J. Knudsen, and A. M. Annaswamy. "[Demand Response in Smart Grids: Participants, Challenges, and Taxonomy](#)". 53th IEEE Conference on Decision and Control, December 2014.
25. D. Soudbakhsh, A. Chakraborty, and A.M. Annaswamy, "[Delay-Aware Co-Designs for Wide-Area Control of Power Grids](#)", IEEE Conference on Decision and Control, December 2014.
26. J. Hansen, J. Knudsen, A. Kiani, A. M. Annaswamy, and J. Stoustrup. "[A Dynamic Market Mechanism for Markets with Shiftable Demand Response](#)". Proceeding of the 19th IFAC World Congress, August 2014.
27. A. Kiani and A. M. Annaswamy. "[Distributed Hierarchical Control for Renewable Energy Integration in a Smart Grid](#)". IEEE PES Conference on Innovative Smart Grid Technologies, Jan 2012.
28. A. Kiani and A. M. Annaswamy. "[A Hierarchical Transactive Control Architecture for Renewables Integration in Smart Grids](#)". 51st IEEE Conference on Decision and Control, 2012.
29. Y. Sharon, A. M. Annaswamy, A. L. Motto and A. Chakraborty, "[Topology identification in distribution network with limited measurements.](#)" in Proc. 2012 IEEE PES Innovative Smart Grid Technologies Conference, 2012.
30. G. Tran, A. Kiani, A.M. Annaswamy, Y. Sharon, A.L. Motto, and A. Chakraborty, "[Necessary and Sufficient Conditions for Observability in Power Systems.](#)" In Proceedings of 2012 IEEE PES Innovative Smart Grid Technologies Conference, Jan, 2012.
31. A. Kiani and A. M. Annaswamy, "[Wholesale Energy Market in a Smart Grid: Dynamic Modeling and Stability](#)", 50th IEEE Conference on Decision and Control, 2011.
32. A. Kiani and A. M. Annaswamy, "[The effect of a smart meter on congestion and stability in a power market.](#)" 49th IEEE Conference on Decision and Control, 2010.
33. A. Kiani and A.M. Annaswamy, "[Perturbation Analysis of Market Equilibrium in the Presence of Renewable Energy Resources and Demand Response.](#)" IEEE PES Conference on Innovative Smart Grid Technologies, Gothenburg, Sweden, October 2010.