




Ram Rajagopal

Associate Professor of Civil and Environmental Engineering and of Electrical Engineering

 Curriculum Vitae available Online

CONTACT INFORMATION

- **Administrator**

Tiffany Branum - Administrative Associate for Professor Ram Rajagopal

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Bio

BIO

Ram Rajagopal is an Associate Professor of Civil and Environmental Engineering at Stanford University, where he directs the Stanford Sustainable Systems Lab (S3L), focused on large-scale monitoring, data analytics and stochastic control for infrastructure networks, in particular, power networks. His current research interests in power systems are in the integration of renewables, smart distribution systems, and demand-side data analytics.

He holds a Ph.D. in Electrical Engineering and Computer Sciences and an M.A. in Statistics, both from the University of California Berkeley, Masters in Electrical and Computer Engineering from University of Texas, Austin and Bachelors in Electrical Engineering from the Federal University of Rio de Janeiro. He is a recipient of the NSF CAREER Award, Powell Foundation Fellowship, Berkeley Regents Fellowship and the Makhoul Conjecture Challenge award. He holds more than 30 patents and several best paper awards from his work and has advised or founded various companies in the fields of sensor networks, power systems, and data analytics.

ACADEMIC APPOINTMENTS

- Associate Professor, Civil and Environmental Engineering
- Associate Professor, Electrical Engineering
- Member, Maternal & Child Health Research Institute (MCHRI)
- Affiliate, Precourt Institute for Energy

ADMINISTRATIVE APPOINTMENTS

- Co-Academic Director, Stanford Global Projects Center, (2018- present)
- Director and Founding Researcher, Stanford University Bits and Watts Lab, (2016- present)

HONORS AND AWARDS

- NSF CAREER Award, NSF (2016)

LINKS

- Ram Rajagopal: <http://web.stanford.edu/~ramr/>
- Powernet Project: <https://powernet.stanford.edu/>

Teaching

COURSES

2021-22

- Data Analytics for Urban Systems: CEE 322 (Aut)
- SmartGrids and Advanced Power Systems Seminar: CEE 272T, EE 292T (Aut, Win, Spr)

2020-21

- Artificial Intelligence Applications in the AEC Industry: CEE 329 (Spr)
- Data Analytics for Urban Systems: CEE 322 (Aut)
- Modern Power Systems Engineering: CEE 272R (Spr)
- SmartGrids and Advanced Power Systems Seminar: CEE 272T, EE 292T (Aut, Win, Spr)
- Sustainable Energy Interdisciplinary Graduate Seminar: ENERGY 309 (Aut, Win)

2019-20

- Battery Systems for Transportation and Grid Services: CEE 292X, EE 292X (Aut)
- Data Analytics for Urban Systems: CEE 322 (Aut)
- Infrastructure Finance and Governance: CEE 323B (Win)
- Modern Power Systems Engineering: CEE 272R (Spr)
- SmartGrids and Advanced Power Systems Seminar: CEE 272T, EE 292T (Aut, Win, Spr)

2018-19

- Data Analytics for Urban Systems: CEE 322 (Aut)
- Introduction to Sensing Networks for CEE: CEE 155, CEE 255 (Spr)
- Modern Power Systems Engineering: CEE 272R (Spr)
- SmartGrids and Advanced Power Systems Seminar: CEE 272T, EE 292T (Aut, Win, Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Lily Buechler, Anthony Degleris, Tulika Majumdar, Thomas Navidi, Carla Pinzon

Postdoctoral Faculty Sponsor

Chad Zanocco

Doctoral Dissertation Advisor (AC)

Lily Buechler, Aaron Goldin, Tianyuan Huang, Matt Kiener, Justin Luke, Sonia Martin, Tao Sun, Oskar Triebe, Ryan Triolo, Gustavo Vianna Cezar, Zhecheng Wang

Master's Program Advisor

JINPU CAO, Jing Chen, Fred Fan, Heyaojing Huang, Alessandro Kerr, Joe Lomuscio, Nathaniel Ramos, Meera Rao, Sylvester Siew, Kamran Tehranchi, Jacob Totaro, Roy Zhang

Doctoral (Program)

Yirong Chen, Rajanie Prabha, Oskar Triebe

Publications

PUBLICATIONS

- **Controlled workplace charging of electric vehicles: The impact of rate schedules on transformer aging** *APPLIED ENERGY*
Powell, S., Kara, E., Sevlian, R., Cezar, G., Kiliccote, S., Rajagopal, R.
2020; 276
- **Exploring household energy rules and activities during peak demand to better determine potential responsiveness to time-of-use pricing** *ENERGY POLICY*
Stelmach, G., Zanocco, C., Flora, J., Rajagopal, R., Boudet, H. S.
2020; 144
- **Pavement performance assessment using a cost-effective wireless accelerometer system** *COMPUTER-AIDED CIVIL AND INFRASTRUCTURE ENGINEERING*
Bajwa, R., Coleri, E., Rajagopal, R., Varaiya, P., Flores, C.
2020
- **Consumption change detection for urban planning: monitoring and segmenting water customers during drought** *Water Resources Research*
Bolorinos, J., Ajami, N. K., Rajagopal, R.
2020; 56 (3)
- **Competition and Efficiency of Coalitions in Cournot Games With Uncertainty** *IEEE TRANSACTIONS ON CONTROL OF NETWORK SYSTEMS*
Zhang, B., Johari, R., Rajagopal, R.
2019; 6 (2): 884–96
- **PaToPaEM: A Data-Driven Parameter and Topology Joint Estimation Framework for Time-Varying System in Distribution Grids** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Yu, J., Weng, Y., Rajagopal, R.
2019; 34 (3): 1682–92
- **Structural Damage Detection and Localization with Unknown Postdamage Feature Distribution Using Sequential Change-Point Detection Method** *JOURNAL OF AEROSPACE ENGINEERING*
Liao, Y., Kiremidjian, A. S., Rajagopal, R., Loh, C.
2019; 32 (2)
- **Coordination of Distributed Energy Storage Under Spatial and Temporal Data Asymmetry** *IEEE TRANSACTIONS ON SMART GRID*
Anderson, K., Rajagopal, R., El Gamal, A.
2019; 10 (2): 1184–94
- **Urban MV and LV Distribution Grid Topology Estimation via Group Lasso** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Liao, Y., Weng, Y., Liu, G., Rajagopal, R.
2019; 34 (1): 12–27
- **DeepSolar: A Machine Learning Framework to Efficiently Construct a Solar Deployment Database in the United States** *JOULE*
Yu, J., Wang, Z., Majumdar, A., Rajagopal, R.
2018; 2 (12): 2605–17
- **PaToPa: A Data-Driven Parameter and Topology Joint Estimation Framework in Distribution Grids** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Yu, J., Weng, Y., Rajagopal, R.
2018; 33 (4): 4335–47
- **A scaling law for short term load forecasting on varying levels of aggregation** *INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS*
Sevlian, R., Rajagopal, R.
2018; 98: 350–61
- **Online Modified Greedy Algorithm for Storage Control Under Uncertainty** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Qin, J., Chow, Y., Yang, J., Rajagopal, R.
2016; 31 (3): 1729–1743
- **Household Energy Consumption Segmentation Using Hourly Data** *IEEE TRANSACTIONS ON SMART GRID*

- Kwac, J., Flora, J., Rajagopal, R.
2014; 5 (1): 420-430
- **Smart Meter Driven Segmentation: What Your Consumption Says About You** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Albert, A., Rajagopal, R.
2013; 28 (4): 4019-4030
 - **Risk-limiting dispatch for integrating renewable power** *INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS*
Rajagopal, R., Bitar, E., Varaiya, P., Wu, F.
2013; 44 (1): 615-628
 - **Value of Aggregation In Smart Grids** *IEEE International Conference on Smart Grid Communications (SmartGridComm)*
Sevlian, R., Rajagopal, R.
IEEE.2013: 714-719
 - **Mining the gap in long-term residential water and electricity conservation** *ENVIRONMENTAL RESEARCH LETTERS*
Bolorinos, J., Rajagopal, R., Ajami, N. K.
2021; 16 (2)
 - **Time and voltage domain load models for appliance-level grid edge simulation and control** *ELECTRIC POWER SYSTEMS RESEARCH*
Goldin, A., Buechler, E., Rajagopal, R., Rivas-Davila, J.
2021; 190
 - **An OpenAI-OpenDSS framework for reinforcement learning on distribution-level microgrids** *2021 IEEE Power & Energy Society General Meeting (PESGM)*
Moy, K., Tae, C., Wang, Y., Henri, G., Bambos, N., Rajagopal, R.
2021
 - **On the Interaction between Autonomous Mobility on Demand Systems and Power Distribution Networks --- An Optimal Power Flow Approach** *IEEE Transactions on Control of Network Systems*
Estandia, A., Schiffer, M., Rossi, F., Luke, J., Kara, E. C., Rajagopal, R., Pavone, M.
2021
 - **Energy resource control via privacy preserving data** *ELECTRIC POWER SYSTEMS RESEARCH*
Chen, X., Navidi, T., Rajagopal, R.
2020; 189
 - **Improving Probabilistic Load Forecasting Using Quantile Regression NN With Skip Connections** *IEEE TRANSACTIONS ON SMART GRID*
Zhang, W., Quan, H., Gandhi, O., Rajagopal, R., Tan, C., Srinivasan, D.
2020; 11 (6): 5442-50
 - **A Geometric Analysis of Power System Loadability Regions** *IEEE TRANSACTIONS ON SMART GRID*
Weng, Y., Rajagopal, R., Zhang, B.
2020; 11 (4): 3580-92
 - **Data-Driven Load Modeling and Forecasting of Residential Appliances** *IEEE TRANSACTIONS ON SMART GRID*
Ji, Y., Buechler, E., Rajagopal, R.
2020; 11 (3): 2652-61
 - **Submodularity of Storage Placement Optimization in Power Networks** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
Qin, J., Yang, I., Rajagopal, R.
2019; 64 (8): 3268-83
 - **Reliability Value of Distributed Solar plus Storage Systems Amidst Rare Weather Events** *IEEE TRANSACTIONS ON SMART GRID*
Wang, J., Qin, J., Zhong, H., Rajagopal, R., Xia, Q., Kang, C.
2019; 10 (4): 4476-86
 - **Incentive mechanism for sharing distributed energy resources** *JOURNAL OF MODERN POWER SYSTEMS AND CLEAN ENERGY*
Wang, J., Zhong, H., Qin, J., Tang, W., Rajagopal, R., Xia, Q., Kang, C.
2019; 7 (4): 837-50

- **Efficient Customer Selection Process for Various DR Objectives** *IEEE TRANSACTIONS ON SMART GRID*
Kwac, J., Kim, J., Rajagopal, R.
2019; 10 (2): 1501–8
- **Congestion management within a multi-service scheduling coordination scheme for large battery storage systems**
Straub, C., Maeght, J., Pache, C., Panciatici, P., Rajagopal, R., IEEE
IEEE.2019
- **An Energy Lifestyles Program for Tweens: A Pilot Study**
Mauriello, M., Zanolco, C., Stelmach, G., Flora, J., Boudet, H., Rajagopal, R., Assoc Comp Machinery
ASSOC COMPUTING MACHINERY.2019
- **Forecasting Residential Monthly Electricity Consumption using Smart Meter Data**
Ignatiadis, D., Henri, G., Rajagopal, R., IEEE
IEEE.2019
- **Siamese Generative Adversarial Privatizer for Biometric Data**
Oleszkiewicz, W., Kairouz, P., Piczak, K., Rajagopal, R., Trzcinski, T., Jawahar, C. V., Li, H., Mori, G., Schindler, K.
SPRINGER INTERNATIONAL PUBLISHING AG.2019: 482–97
- **Flexible Market for Smart Grid: Coordinated Trading of Contingent Contracts** *IEEE TRANSACTIONS ON CONTROL OF NETWORK SYSTEMS*
Qin, J., Rajagopal, R., Varaiya, P.
2018; 5 (4): 1657–67
- **Tri-Level Expansion Planning for Transmission Networks and Distributed Energy Resources Considering Transmission Cost Allocation** *IEEE TRANSACTIONS ON SUSTAINABLE ENERGY*
Wang, J., Zhong, H., Tang, W., Rajagopal, R., Xia, Q., Kang, C.
2018; 9 (4): 1844–56
- **Economic Benefits of Integrating Solar-Powered Heat Pumps Into a CHP System** *IEEE TRANSACTIONS ON SUSTAINABLE ENERGY*
Wang, J., Zhong, H., Tan, C., Chen, X., Rajagopal, R., Xia, Q., Kang, C.
2018; 9 (4): 1702–12
- **Probabilistic baseline estimation based on load patterns for better residential customer rewards** *INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS*
Weng, Y., Yu, J., Rajagopal, R.
2018; 100: 508–16
- **Actively Calibrated Line Mountable Capacitive Voltage Transducer for Power Systems Applications** *IEEE TRANSACTIONS ON SMART GRID*
Sevlian, R., Rajagopal, R.
2018; 9 (5): 3942–53
- **Lifestyle Segmentation Based on Energy Consumption Data** *IEEE TRANSACTIONS ON SMART GRID*
Kwac, J., Flora, J., Rajagopal, R.
2018; 9 (4): 2409–18
- **Benchmarking building energy efficiency using quantile regression** *ENERGY*
Roth, J., Rajagopal, R.
2018; 152: 866–76
- **Performance guaranteed state estimation for renewable penetration with improved meters** *JOURNAL OF ENGINEERING-JOE*
Weng, Y., Yu, J., Rajagopal, R.
2018: 323–31
- **Good Consumer or Bad Consumer: Economic Information Revealed From Demand Profiles** *IEEE TRANSACTIONS ON SMART GRID*
Yu, Y., Liu, G., Zhu, W., Wang, F., Shu, B., Zhang, K., Astier, N., Rajagopal, R.
2018; 9 (3): 2347–58
- **Robust Building Energy Load Forecasting Using Physically-Based Kernel Models** *ENERGIES*
Prakash, A., Xu, S., Rajagopal, R., Noh, H.

2018; 11 (4)

- **Finding the Right Consumers for Thermal Demand-Response: An Experimental Evaluation** *IEEE TRANSACTIONS ON SMART GRID*
Albert, A., Rajagopal, R.
2018; 9 (2): 564–72
- **Outage Detection Using Load and Line Flow Measurements in Power Distribution Systems** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Sevlian, R., Zhao, Y., Rajagopal, R., Goldsmith, A., Poor, H.
2018; 33 (2): 2053–69
- **The wavelet transform as a Gaussian process for damage detection** *STRUCTURAL CONTROL & HEALTH MONITORING*
Balafas, K., Kiremidjian, A. S., Rajagopal, R.
2018; 25 (2)
- **Balancing marine ecosystem impact and freshwater consumption with water-use fees in California's power markets: An evaluation of possibilities and trade-offs** *Balancing marine ecosystem impact and freshwater consumption with water-use fees in California's power markets: An evaluation of possibilities and trade-offs*
Bolorinos, J., Yu, Y., Ajami, N. K., Rajagopal, R.
2018; 226 (C): 644-654
- **A Two-layer Decentralized Control Architecture for DER Coordination**
Navidi, T., El Gamal, A., Rajagopal, R., IEEE
IEEE.2018: 6019–24
- **Understanding Compressive Adversarial Privacy**
Chen, X., Kairouz, P., Rajagopal, R., IEEE
IEEE.2018: 6824–31
- **Good Consumer or Bad Consumer: Economic Information Revealed from Demand Profiles**
Yu, Y., Liu, G., Zhu, W., Wang, F., Shu, B., Zhang, K., Rajagopal, R., Astier, N., IEEE
IEEE.2018
- **Automatic Power Exchange for Distributed Energy Resource Networks: Flexibility Scheduling and Pricing**
Qin, J., Mather, J., Joo, J., Rajagopal, R., Poolla, K., Varaiya, P., IEEE
IEEE.2018: 1572–79
- **Context-Aware Generative Adversarial Privacy** *ENTROPY*
Huang, C., Kairouz, P., Chen, X., Sankar, L., Rajagopal, R.
2017; 19 (12)
- **Optimal bidding strategy for microgrids in joint energy and ancillary service markets considering flexible ramping products** *APPLIED ENERGY*
Wang, J., Zhong, H., Tang, W., Rajagopal, R., Xia, Q., Kang, C., Wang, Y.
2017; 205: 294–303
- **Data-driven planning of distributed energy resources amidst socio-technical complexities** *Nature Energy*
Jain, R. K., Qin, J., Rajagopal, R.
2017
- **DEMAND AND FLEXIBILITY OF RESIDENTIAL APPLIANCES: AN EMPIRICAL ANALYSIS**
Ji, Y., Rajagopal, R., IEEE
IEEE.2017: 1020–24
- **The "Smart Dim Fuse": A New Approach to Load Control as a Distributed Energy Resource**
Goldin, A., Rajagopal, R., Rivetta, C., Davila, J., IEEE
IEEE.2017
- **Robust Mapping Rule Estimation for Power Flow Analysis in Distribution Grids**
Yu, J., Weng, Y., Rajagopal, R., IEEE
IEEE.2017
- **On Certainty Equivalence of Demand Charge Reduction Using Storage**

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- Yu, J., Qin, J., Rajagopal, R., IEEE
IEEE.2017: 3430–37
- **Energy Storage Sharing Strategy in Distribution Networks Using Bi-level Optimization Approach**
Chen, H., Yu, Y., Hu, Z., Luo, H., Tan, C., Rajagopal, R., IEEE
IEEE.2017
 - **Data-Driven Joint Topology and Line Parameter Estimation for Renewable Integration**
Yu, J., Weng, Y., Rajagopal, R., IEEE
IEEE.2017
 - **Approximation Algorithms for Optimization of Combinatorial Dynamical Systems** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
Yang, I., Burden, S. A., Rajagopal, R., Sastry, S. S., Tomlin, C. J.
2016; 61 (9): 2644-2649
 - **Data-Driven Targeting of Customers for Demand Response** *IEEE TRANSACTIONS ON SMART GRID*
Kwac, J., Rajagopal, R.
2016; 7 (5): 2199-2207
 - **Scheduling Non-Preemptive Deferrable Loads** *IEEE TRANSACTIONS ON POWER SYSTEMS*
O'Brien, G., Rajagopal, R.
2016; 31 (2): 835-845
 - **Distributed Online Modified Greedy Algorithm for Networked Storage Operation Under Uncertainty** *IEEE TRANSACTIONS ON SMART GRID*
Qin, J., Chow, Y., Yang, J., Rajagopal, R.
2016; 7 (2): 1106-1118
 - **Parking Sensing and Information System Sensors, Deployment, and Evaluation** *TRANSPORTATION RESEARCH RECORD*
Chen, X., Qian, Z. (., Rajagopal, R., Stiers, T., Flores, C., Kavalier, R., Williams, F.
2016: 81-89
 - **Shapley Value Estimation for Compensation of Participants in Demand Response Programs** *IEEE TRANSACTIONS ON SMART GRID*
O'Brien, G., El Gamal, A., Rajagopal, R.
2015; 6 (6): 2837-2844
 - **Optimal allocation of computational resources in hydrogeological models under uncertainty** *ADVANCES IN WATER RESOURCES*
Moslehi, M., Rajagopal, R., de Barros, F. P.
2015; 83: 299-309
 - **Ranking appliance energy efficiency in households: Utilizing smart meter data and energy efficiency frontiers to estimate and identify the determinants of appliance energy efficiency in residential buildings** *ENERGY AND BUILDINGS*
Kavousian, A., Rajagopal, R., Fischer, M.
2015; 99: 220-230
 - **Wind Aggregation Via Risky Power Markets** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Zhao, Y., Qin, J., Rajagopal, R., Goldsmith, A., Poor, H. V.
2015; 30 (3): 1571-1581
 - **Competition and Coalition Formation of Renewable Power Producers** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Zhang, B., Johari, R., Rajagopal, R.
2015; 30 (3): 1624-1632
 - **Optimal dynamic pricing for morning commute parking** *TRANSPORTMETRICA A-TRANSPORT SCIENCE*
Qian, Z. (., Rajagopal, R.
2015; 11 (4): 291-316
 - **Structural health monitoring of progressive damage** *EARTHQUAKE ENGINEERING & STRUCTURAL DYNAMICS*
Mollineaux, M., Rajagopal, R.
2015; 44 (4): 583-600

- **Thermal Profiling of Residential Energy Use** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Albert, A., Rajagopal, R.
2015; 30 (2): 602-611
- **The impacts of electricity dispatch protocols on the emission reductions due to wind power and carbon tax.** *Environmental science & technology*
Yu, Y., Rajagopal, R.
2015; 49 (4): 2568-2576
- **Where Ds My Parking Spot? Online and Offline Prediction of Time-Varying Parking Occupancy** *TRANSPORTATION RESEARCH RECORD*
Tamrazian, A., Qian, Z. (., Rajagopal, R.
2015: 77-85
- **SnowFort: An Open Source Wireless Sensor Network for Data Analytics in Infrastructure and Environmental Monitoring** *IEEE SENSORS JOURNAL*
Liao, Y., Mollineaux, M., Hsu, R., Bartlett, R., Singla, A., Raja, A., Bajwa, R., Rajagopal, R.
2014; 14 (12)
- **Cost-of-Service Segmentation of Energy Consumers** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Albert, A., Rajagopal, R.
2014; 29 (6): 2795-2803
- **Optimal dynamic parking pricing for morning commute considering expected cruising time** *TRANSPORTATION RESEARCH PART C-EMERGING TECHNOLOGIES*
Qian, Z. (., Rajagopal, R.
2014; 48: 468-490
- **Optimal occupancy-driven parking pricing under demand uncertainties and traveler heterogeneity: A stochastic control approach** *TRANSPORTATION RESEARCH PART B-METHODOLOGICAL*
Qian, Z. (., Rajagopal, R.
2014; 67: 144-165
- **Network Risk Limiting Dispatch: Optimal Control and Price of Uncertainty** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
Zhang, B., Rajagopal, R., Tse, D.
2014; 59 (9): 2442-2456
- **RSSI-Fingerprinting-Based Mobile Phone Localization With Route Constraints** *IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY*
Ergen, S. C., Tetikol, H. S., Kontik, M., Sevlian, R., Rajagopal, R., Varaiya, P.
2014; 63 (1): 423-428
- **A Model For The Effect of Aggregation on Short Term Load Forecasting** *IEEE PES General Meeting*
Sevlian, R. A., Rajagopal, R.
IEEE.2014
- **Do Wind Power Producers have Market Power and Exercise It?** *IEEE PES General Meeting*
Yu, Y., Zhang, B., Rajagopal, R.
IEEE.2014
- **Aggregation for Load Servicing** *IEEE PES General Meeting*
Patel, S., Sevlian, R., Zhang, B., Rajagopal, R.
IEEE.2014
- **Data-Driven Benchmarking of Building Energy Efficiency Utilizing Statistical Frontier Models** *JOURNAL OF COMPUTING IN CIVIL ENGINEERING*
Kavousian, A., Rajagopal, R.
2014; 28 (1): 79-88
- **Towards optimal allocation of computer resources: Trade-offs between uncertainty quantification, discretization and model reduction** *ENVIRONMENTAL MODELLING & SOFTWARE*
Leube, P. C., de Barros, F. P., Nowak, W., Rajagopal, R.
2013; 50: 97-107
- **Sequential structural damage diagnosis algorithm using a change point detection method** *JOURNAL OF SOUND AND VIBRATION*

- Noh, H., Rajagopal, R., Kiremidjian, A. S.
2013; 332 (24): 6419-6433
- **Detection and Statistics of Wind Power Ramps** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Sevlian, R., Rajagopal, R.
2013; 28 (4): 3610-3620
 - **Determinants of residential electricity consumption: Using smart meter data to examine the effect of climate, building characteristics, appliance stock, and occupants' behavior** *ENERGY*
Kavousian, A., Rajagopal, R., Fischer, M.
2013; 55: 184-194
 - **Risk Limiting Dispatch in Congested Networks** *50th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*
Rajagopal, R., Tse, D., Zhang, B.
IEEE.2013: 1900-1907
 - **Risky Power Forward Contracts for Wind Aggregation** *51st Annual Allerton Conference on Communication, Control, and Computing*
Zhao, Y., Qin, J., Rajagopal, R., Goldsmith, A., Poor, H. V.
IEEE.2013: 54-61
 - **Building dynamic thermal profiles of energy consumption for individuals and neighborhoods** *IEEE International Conference on Big Data (Big Data)*
Albert, A., Rajagopal, R.
IEEE.2013
 - **Demand Response Targeting Using Big Data Analytics** *IEEE International Conference on Big Data (Big Data)*
Kwac, J., Rajagopal, R.
IEEE.2013
 - **Dynamic Programming Solution to Distributed Storage Operation and Design** *General Meeting of the IEEE-Power-and-Energy-Society (PES)*
Qin, J., Rajagopal, R.
IEEE.2013
 - **Financial Transmission Rights Perform Well in Power Markets with High Penetration of Wind Energy?** *General Meeting of the IEEE-Power-and-Energy-Society (PES)*
Yu, Y., Rajagopal, R.
IEEE.2013
 - **Outage Detection in Power Distribution Networks with Optimally-Deployed Power Flow Sensors** *General Meeting of the IEEE-Power-and-Energy-Society (PES)*
Zhao, Y., Sevlian, R., Rajagopal, R., Goldsmith, A., Poor, H. V.
IEEE.2013
 - **Storage in Risk Limiting Dispatch: Control and Approximation** *American Control Conference (ACC)*
Qin, J., Su, H., Rajagopal, R.
IEEE.2013: 4202-4208
 - **A Method for Automatically Scheduling Notified Deferrable Loads** *American Control Conference (ACC)*
O'Brien, G., Rajagopal, R.
IEEE.2013: 5080-5085
 - **Utility Customer Segmentation Based on Smart Meter Data: Empirical Study** *IEEE International Conference on Smart Grid Communications (SmartGridComm)*
Kwac, J., Tan, C., Sintov, N., Flora, J., Rajagopal, R.
IEEE.2013: 720-725
 - **Oriented Wireless Sensing for Structural Health Monitoring** *9th International Workshop on Structural Health Monitoring (IWSHM)*
Mollineaux, M., Rajagopal, R., Kiremidjian, A., Balafas, K.
DESTECH PUBLICATIONS, INC.2013: 73-80
 - **Risk Limiting Dispatch with Ramping Constraints** *IEEE International Conference on Smart Grid Communications (SmartGridComm)*
Qin, J., Zhang, B., Rajagopal, R.

IEEE.2013: 791–796

- **Data-Driven Forecasting Algorithms for Building Energy Consumption** *Conference on Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems*
Noh, H. Y., Rajagopal, R.
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Sequential detection of progressive damage** *Conference on Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems*
Mollineaux, M., Rajagopal, R.
SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Bringing Wind Energy to Market** *IEEE TRANSACTIONS ON POWER SYSTEMS*
Bitar, E. Y., Rajagopal, R., Khargonekar, P. P., Poolla, K., Varaiya, P.
2012; 27 (3): 1225-1235
- **Damage diagnosis algorithm using a sequential change point detection method with an unknown distribution for damage** *Conference on Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems*
Noh, H. Y., Rajagopal, R., Kiremidjian, A. S.
SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Risk Limiting Dispatch of Wind Power** *American Control Conference (ACC)*
Rajagopal, R., Bitar, E., Wu, F., Varaiya, P.
IEEE COMPUTER SOC.2012: 4417–4422
- **Risk Limiting Dispatch** *General Meeting of the IEEE-Power-and-Energy-Society*
Entriken, R., Varaiya, P., Wu, F., Bialek, J., Dent, C., Tuohy, A., Rajagopal, R.
IEEE.2012
- **Optimal Electric Energy Storage Operation** *General Meeting of the IEEE-Power-and-Energy-Society*
Qin, J., Sevlian, R., Varodayan, D., Rajagopal, R.
IEEE.2012
- **Wind Power Ramps: Detection and Statistics** *General Meeting of the IEEE-Power-and-Energy-Society*
Sevlian, R., Rajagopal, R.
IEEE.2012
- **Simultaneous Optimization of Sensor Placements and Balanced Schedules** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
Krause, A., Rajagopal, R., Gupta, A., Guestrin, C.
2011; 56 (10): 2390-2405
- **Damage Diagnosis Algorithm for Civil Structures Using a Sequential Change Point Detection Method and Time-Series Analysis** *8th International Workshop on Structural Health Monitoring*
Noh, H. Y., Rajagopal, R., Kiremidjian, A. S.
DESTTECH PUBLICATIONS, INC.2011: 55–62
- **The Role of Co-located Storage for Wind Power Producers in Conventional Electricity Markets** *American Control Conference (ACC)*
Bitar, E., Rajagopal, R., Khargonekar, P., Poolla, K.
IEEE.2011: 3886–3891
- **Arterial Travel Time Estimation Based On Vehicle Re-Identification Using Magnetic Sensors: Performance Analysis** *14th International IEEE Conference on Intelligent Transportation Systems (ITSC)*
Sanchez, R. O., Flores, C., Horowitz, R., Rajagopal, R., Varaiya, P.
IEEE.2011: 997–1002
- **Real-Time Measurement of Link Vehicle Count and Travel Time in a Road Network** *IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS*
Kwong, K., Kavalier, R., Rajagopal, R., Varaiya, P.
2010; 11 (4): 814-825
- **Arterial travel time estimation based on vehicle re-identification using wireless magnetic sensors** *TRANSPORTATION RESEARCH PART C-EMERGING TECHNOLOGIES*

Kwong, K., Kavalier, R., Rajagopal, R., Varaiya, P.
2009; 17 (6): 586-606

- **Distributed Online simultaneous fault detection for multiple sensors** *2008 INTERNATIONAL CONFERENCE ON INFORMATION PROCESSING IN SENSOR NETWORKS, PROCEEDINGS*
Rajagopal, R., Nguyen, X., Ergen, S. C., Varaiya, P.
2008: 133-144
- **Universal quantile estimation with feedback in the communication-constrained setting** *2006 IEEE INTERNATIONAL SYMPOSIUM ON INFORMATION THEORY, VOLS 1-6, PROCEEDINGS*
Rajagopal, R., Wainwright, M. J., Varaiya, P.
2006: 836-840
- **Peak locations in all-pass signals the Makhoul Conjecture Challenge** *2001 IEEE INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH, AND SIGNAL PROCESSING, VOLS I-VI, PROCEEDINGS*
Rajagopal, R., Wenzel, L.
2001: 3961-3964