

HAO ZHU

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WORK EXPERIENCE

University of Illinois Assistant Professor at the Dept. of ECE Assistant Professor at the Information Trust Institute (ITI)	Urbana, IL 2014 – present 2014 – present
University of Illinois Research Associate at ECE and ITI	Urbana, IL 2012 – 2013
University of Minnesota Research Assistant at the SPiNCOM group	Twin Cities, MN 2006 – 2012
NEC Labs America Research Intern at the Mobile & Comm. Networks Group	Princeton, NJ 2011

EDUCATION

University of Minnesota Ph.D. in Electrical and Computer Engineering <i>Advisor:</i> Prof. Georgios B. Giannakis <i>Thesis:</i> “Sparsity-Cognizant Algorithms with Applications to Communications, Signal Processing, and the Smart Grid”	Twin Cities, Minnesota August 2012
University of Minnesota M.Sc. in Electrical Engineering (minor: Mathematics) <i>Advisor:</i> Prof. Georgios B. Giannakis <i>Thesis:</i> “Distributed Tracking, Decoding, and Demodulation Using Wireless Sensor Networks”	Twin Cities, Minnesota December 2009
Tsinghua University B.Sc. in Electrical Engineering (with honors) <i>Advisor:</i> Prof. Xiqin Wang <i>Thesis:</i> “Polynomial Phase Signal Radar Waveform Design”	Beijing, China July 2006

TEACHING EXPERIENCE

University of Illinois	Urbana, IL
• ECE 445: Senior Design Laboratory	Fall 2016
• ECE 498HZ: Power Distribution System Analysis (New Course)	Spring 2016
• ECE 530: Analysis of Large-Scale Electrical Systems	Fall 2014, 15
• ECE 398BD: Making Sense of Big Data	Spring 2015
• ECE 330: Power Circuits & Electromechanics	Spring 2013-17
• ECE 530: Analysis of Large-Scale Electrical Systems (Guest Lecturer)	Fall 2013
• ECE 333 Green Electric Energy (Guest Lecturer)	Nov 2012

University of Minnesota

Twin Cities, MN

- EE 8581 Detection & Estimation Theory (Guest Lecturer) April 2011
- EE 8231 Optimization Theory (TA) Fall 2009
- EE 3025 Statistical Methods in ECE (TA) Fall 2008 – Fall 2009
- EE 5501 Digital Communications (TA) Fall 2008

ADDITIONAL TEACHING EXPERIENCE

- Attended the College of Engineering AE3 Collins Scholar program, University of Illinois, Urbana 2013-2014
- Attended workshop on “Mentoring with a Difference: Guiding graduate students toward their own goals,” University of Illinois, Urbana January 2014
- Attended workshop on “Mentoring Undergraduate and Graduate Researchers,” University of Illinois, Urbana December 2012
- Attended workshop on “Designing Courses to Support Student Learning and Teacher Satisfaction,” University of Minnesota, Minneapolis December 2010
- Completed graduate school course on “Teaching in Higher Education,” offered through the UMN “Preparing Future Faculty” program Fall 2010

FUNDING EXPERIENCE **(Total: ~ \$6M; My share: ~ \$2M)**

- PI: “INMODEL: Integrated Modeling of DERs and Loads into Distribution System Analysis and Visualization,” US DOE-NETL Program, \$1,200,000 (Pending) 2017-2020
- PI: “CAREER: Cyber-Physical Situational Awareness for the Power Grid Infrastructures,” US National Science Foundation (NSF) ECCS, \$500,836 (Pending) 2017-2022
- Co-PI: “INGRESS: Integration of Green Renewable Energy Sources Securely with the Buildings and Electric Power,” US DOE-NETL CEDS Program, \$900,000 (subbed from United Technologies UTRC) 2016-2019
- PI: “Aggregating Distributed Energy Resources as Secure Virtual Power Plants,” US DOE Sandia National Lab Academic Alliance Program, \$70,000 2016-2017
- PI (lead): “Collaborative Research: Towards Communication-Cognizant Voltage Regulation and Energy Management for Power Distribution Systems,” US National Science Foundation (NSF) ECCS Program, \$228,456 2016-2019
- Co-PI: “Collaborative Research: A Holistic Approach to Wind Energy Integration: From the Atmospheric Boundary Layer to the Power Grid,” US National Science Foundation (NSF) ECCS Program, \$267,479 2016-2019
- Co-PI: “GridData: Synthetic Data for Power Grid R&D,” US DOE ARPA-E GRIDDATA Program, \$1,028,325 2016-2018
- PI: “Leveraging CVR for Energy Efficiency, Demand Side Control and Voltage Stability Enhancement in Integrated T&D Systems,” Power Systems Engineering Research Center (PSERC), \$70,000 (total: \$220,000) 2016-2018
- PI: “A Data-Driven Network Tomography Approach for Evaluating and Improving the Resilience of Power Grids,” Siebel Energy Institute, \$50,000 2016
- Senior Personnel: “CREDC: Cyber Resilient Energy Delivery Consortium,” US Department of Energy 2015-2020
- Co-PI: “Improved System Modeling for GMD and EMP Assessments,” US DOE Bonneville

- Power Administration (BPA), \$251,670 2015-2017
- Co-PI: “Interdependent Critical Infrastructure Systems for Synergized Utilization of Multiple Energy Sources Toward Sustainable Vehicular Transportation,” UIUC Institute for Sustainability, Energy & Environment (iSEE), \$350,000 2015-2018
- Co-PI: “Hazards SEES: Improved prediction of geomagnetic disturbances and their impacts on power distribution systems,” US NSF EAR Program, \$2,670,000 2015-2017
- PI: “Energy Analytics: Advanced Metering for Non-intrusive Load Identification and Monitoring,” Texas Instrument Inc. University Grant, \$60,000 2014-2016
- PI (lead): “Load Model Complexity Analysis and Real-Time Load Tracking,” Power Systems Engineering Research Center (PSERC), \$80,000 (total: \$220,000) July 2014-2016
- Contributed to the proposal granted for FY13 on “Distributed and Resilient Voltage Control of Distributed Energy Resources in the Smart Grid,” ABB Research Grant Program, PI: A. Dominguez-Garcia (co-PI: T. J. Overbye) July 2013
- Prepared yearly proposals and quarterly reports for the Army Research Lab Collaborative Technology Alliance (ARL-CTA) program sponsored by the Communications and Networking Consortium. 2007-2009

PATENTS

- “Robust Parametric Power Spectral Density (PSD) Construction,” (with G. B. Giannakis *et al*); U.S. Patent #9,363,679 June 2016
- “Precoder Design for Physical Layer Multicasting,” (with N. Prasad and S. Rangarajan); U.S. Patent #8917648 Dec 2014
- “State Estimation of Electrical Power Networks using Semidefinite Relaxation,” (with G. B. Giannakis); U.S. Patent App # 13/862,139 (pending) Apr 2013

PROFESSIONAL AFFILIATIONS AND SERVICES

- Steering Committee Member of the IEEE Smart Grid 2015-present
- IEEE SP Society’s Representative on the IEEE Trans. Smart Grid 2015-present
- Publicity Committee Member for the eighth ACM International Conference on Future Energy Systems (ACM e-Energy 2017)
- Guest co-Editor for the *IET Gen., Tran., & Dist.* journal’s special issues on “Distributed & autonomous dispatch and control for active distribution networks/microgrids.” 2016
- Organized and chaired a special session on “Smart Grids” at the 50th Asilomar Conf. on Signals, Systems, & Computers 2016
- Chaired a panel session on “Integration of Distributed Energy Resources (DERs): Challenges and Opportunities” at the IEEE PES ISGT Conference 2016
- Invited to speak at the “Measurements and Their Integration Challenges for Distribution State Estimation” and “Big Data Empirical Assessment of Demand Response” panels at the IEEE PES General Meeting 2016
- item Technical Co-Chair of the IEEE GlobalSIP Symposium on Signal and Information Processing for Optimizing Future Energy Systems 2015
- Faculty advisor for the Power & Energy Conf. at Illinois (PECI) 2015-present
- Attended the National Research Council Workshop on Power Grid Feb 2014
- Judge for UIUC Program for Undergraduate Research Experience (PURE) 2013

- Reviewer for IEEE Trans. Smart Grid, IEEE Trans. Power Systems, IEEE Trans. Energy Conversion, IEEE Power Engineering Letters, IEEE Trans. Signal Processing, IEEE Journal of Selected Topics in Signal Processing, IEEE Journal on Selected Areas in Communications, IEEE Trans. Wireless Communications, IEEE Trans. Communications, IEEE Trans. Vehicle Technology, IEEE Communications Letters, IEEE Trans. Control over Networks, IEEE Trans. Control Systems Technology, IEEE Sensors Journal, IEEE Trans. Industrial Informatics, EURASIP Journal on Advances in Signal Processing, regular reviewer of conference papers.
- Technical Program Committee (TPC) member for 2016-2015 IEEE Intl. Conf. on Smart Grid (ISGT), 2016 PSCC, 2016 ICC, 2014-2015 IEEE SmartGridComm, 2015 IEEE GlobeCom.

HONORS AND AWARDS

- Air Force Research Lab Summer Faculty Fellowship, Directorate of Information 2016
- Seed Grant Awardee, Siebel Energy Institute 2016
- Collins Scholar, University of Illinois 2014
- Doctoral Dissertation Fellowship, University of Minnesota 2011-2012
- Student Travel Grant, IEEE Communication Society October 2011
- Best Student Paper Finalist in the 11th SPAWC June 2010
- Student Travel Fellowship, Dept of ECE, University of Minnesota Fall 2008
- Graduate School Fellowship, University of Minnesota 2006-2008
- First-class Undergraduate Scholarship, Tsinghua University 2003-2006

STUDENT HONORS AND AWARDS

- Max Liu: Siebel Scholar, Siebel Energy Institute Oct. 2016
- Max Liu: Best Paper Award (2nd-place), North American Power Symp. (NAPS) Sep. 2016
- Jamie Padilla: Outstanding Engineering Poster Award, UIUC Undergraduate Research Symposium May 2016
- Kaiqing Zhang: Best Poster Award, PSERC IAB Meeting Dec. 2015
- Ceci Klauber: Best Poster Award (2nd-place), Society of Women Engr. Conf. Oct. 2015
- Shamina Hossain: Best Student Paper Award (3rd-place), NAPS Sep. 2014

PUBLICATIONS

Book chapters

- [B1] G. B. Giannakis, Q. Ling, G. Mateos, I. D. Schizas, and **H. Zhu**, "Decentralized Learning for Wireless Communications and Networking," in *Splitting Methods in Communication and Imaging, Science and Engineering*, co-edited by R. Glowinski, S. Osher, W. Yin, Springer, 2016 (invited).

Journal papers

- [J21] H.-J. Liu, W. Shi, and **H. Zhu**, "Decentralized Dynamic Optimization for Power Network Voltage Control," *IEEE Trans. Signal and Information Processing over Networks*, 2016

(accepted).

- [J20] K. Zhang, **H. Zhu**, and S. Guo, "Dependency Analysis and Improved Parameter Estimation for Dynamic Composite Load Modeling," *IEEE Trans. Power Systems*, 2016 (accepted).
- [J19] M. Kazerooni, **H. Zhu**, and T. J. Overbye, "Improved Modeling of Geomagnetically Induced Currents Utilizing Derivation Techniques for Substation Grounding Resistance," *IEEE Trans. Power Delivery*, 2016 (accepted).
- [J18] M. Kazerooni, **H. Zhu**, T. J. Overbye, and D. A. Wojtczak, "Transmission System Geomagnetically Induced Current Model Validation," *IEEE Trans. Power Systems*, 2016 (accepted).
- [J17] **H. Zhu** and H.-J. Liu, "Fast Local Voltage Control Under Limited Reactive Power: Optimality and Stability Analysis," *IEEE Trans. Power Systems*, vol. 31, no. 5, pp. 3794-3803, 2016.
- [J16] B. A. Robbins, **H. Zhu**, and A. D. Dominguez-Garcia, "Optimal Tap Setting of Voltage Regulation Transformers in Unbalanced Distribution Systems," *IEEE Trans. Power Systems*, vol. 31, no. 1, pp. 256-267, 2016.
- [J15] N. Tobbin, **H. Zhu**, and L. Chamorro, "Spectral behavior of the turbulence-driven power fluctuations of wind turbines," *Journal of Turbulence*, vol. 16, no. 9, pp. 832-846, 2015.
- [J14] **H. Zhu** and T. J. Overbye, "Blocking Device Placement for Mitigating the Effects of Geomagnetically Induced Currents," *IEEE Trans. Power Systems*, vol. 30, no. 4, pp. 2081-2089, 2015.
- [J13] **H. Zhu** and G. B. Giannakis, "Power System Nonlinear State Estimation using Distributed Semidefinite Programming," *IEEE Journal of Special Topics in Signal Processing*, vol. 8, no. 6, pp. 1039-1050, 2014.
- [J12] C. Chen, **H. Zhu** and J. Wang, "Effects of Phasor Measurement Uncertainty on Power Line Outage Detection," *IEEE Journal of Special Topics in Signal Processing*, vol. 8, no. 6, pp. 1127-1139, 2014.
- [J11] N. Prasad, H. Zhang, **H. Zhu**, and S. Rangarajan, "Multi-User Scheduling in the 3GPP LTE Cellular Uplink," *IEEE Trans. Mobile Computing*, vol. 13, no. 1, pp. 130 - 145, Jan. 2014.
- [J10] E. Dall'Anese, **H. Zhu**, and Georgios B. Giannakis, "Distributed Optimal Power Flow for Smart Microgrids," *IEEE Trans. Smart Grid*, vol. 4, no. 3, pp. 1464-1475, Sep. 2013.
- [J9] G. B. Giannakis, N. Gatsis, V. Kekatos, S.-J. Kim, **H. Zhu**, and B. Wollenberg, "Monitoring and optimization for power grids: A signal processing perspective," *IEEE Signal Processing Magazine (Feature Article)*, vol. 30, no. 5, pp. 107 - 128, Sep. 2013.
- [J8] N. Prasad, H. Zhang, **H. Zhu**, and S. Rangarajan, "Multi-User MIMO Scheduling in the Fourth Generation Cellular Uplink," *IEEE Trans. Wireless Communications*, vol. 12, no. 9, pp. 4272-4285, Sep. 2013.
- [J7] **H. Zhu** and G. B. Giannakis, "Sparse Overcomplete Representations for Efficient Identification of Power Line Outages," *IEEE Trans. Power Systems*, vol. 27, no. 4, pp. 2215-2224, November 2012.
- [J6] **H. Zhu**, N. Prasad, and S. Rangarajan, "Precoder Design for Physical Layer Multicasting," *IEEE Trans. Signal Processing*, vol. 60, no. 11, pp. 5932 - 5947, November 2012.
- [J5] **H. Zhu**, G. Leus, and G. B. Giannakis, "Sparsity-Cognizant Total Least-Squares for Perturbed Compressive Sampling," *IEEE Trans. Signal Processing*, vol. 59, no. 5, pp. 2002-2016, May 2011.
- [J4] **H. Zhu** and G. B. Giannakis, "Exploiting Sparse User Activity in Multiuser Detection," *IEEE Trans. Communications*, vol. 59, no. 2, pp. 454-465, February 2011.
- [J3] **H. Zhu**, A. Cano, and G. B. Giannakis, "Distributed Demodulation using Wireless Sensor

Networks,” *IEEE Trans. Wireless Communications*, vol. 9, no. 6, pp. 2044-2054, June 2010.

- [J2] **H. Zhu**, G. B. Giannakis, and A. Cano, “Distributed In-Network Decoding,” *IEEE Trans. Signal Processing*, vol. 57, no. 10, pp. 3970-3983, October 2009.
- [J1] **H. Zhu**, I. D. Schizas and G. B. Giannakis, “Power-Efficient Dimensionality Reduction for Distributed Channel-Aware Kalman Tracking Using Wireless Sensor Networks,” *IEEE Trans. Signal Processing*, vol. 57, no. 8, pp. 3193-3207, August 2009.

Pending journal papers

- [P6] C. Klauber and **H. Zhu**, “Lossy Linear Power Flow Modeling for Unbalanced Distribution System State Estimation,” *IEEE Trans. Power Systems*, 2016 (submitted).
- [P5] P. Huynh, **H. Zhu**, and D. Aliprantis, “Non-intrusive Parameter Estimation for Single-Phase Induction Motors using Transient Data,” *IEEE Trans. Energy Conversion*, 2016 (submitted).
- [P4] L.-Y. Lu, H.-J. Liu, and **H. Zhu**, “Securing Distributed Control of Microgrid Generation using Dual Updates,” *IEEE Trans. Signal and Information Processing over Networks*, 2016 (submitted).
- [P3] H.-J. Liu, W. Shi, and **H. Zhu**, “Communication-Cognizant Hybrid Voltage Control in Power Distribution Networks,” *IEEE Trans. Smart Grid: Special Issue on Distributed Control & Efficient Optimization*, 2016 (invited).
- [P2] H.-J. Liu, W. Shi, and **H. Zhu**, “Distributed Voltage Control in Distribution Networks: Online and Robust Implementations,” *IEEE Trans. Smart Grid*, 2016 (submitted).
- [P1] Y. Liang, **H. Zhu**, and D. Chen, “Optimal Blocker Placement Algorithms for Power Systems Geomagnetic Induced Currents Mitigations,” *IEEE Trans. Power Systems*, 2016 (submitted).

Conference papers

- [C44] K. Zhang, S. Guo, and **H. Zhu**, “Parameter Sensitivity and Dependency Analysis for the WECC Dynamic Composite Load Model,” *Proc. 47th Hawaii Intl. Conf. System Sciences*, Jan. 2017.
- [C43] C. Klauber and **H. Zhu**, “Power Network Topology Control for Mitigating the Effects of Geomagnetically Induced Currents,” *Proc. 50th Asilomar Conf. Signals, Systems, & Computers*, Nov. 2016.
- [C42] P. Huynh, **H. Zhu**, and D. Aliprantis, “Parameter Estimation for Single-Phase Induction Motors Using Test Measurement Data,” *Proc. 48th North America Power Symposium (NAPS)*, Sep. 2016.
- [C41] L.-Y. Lu, H.-J. Liu, and **H. Zhu**, “Distributed Secondary Control for Isolated Microgrids Under Malicious Attacks,” *Proc. 48 North America Power Symposium (NAPS)*, Sep. 2016 (**2nd Best Paper Award**).
- [C40] H.-J. Liu, W. Shi, and **H. Zhu**, “Dynamic Decentralized Voltage Control for Power Distribution Networks,” *Proc. IEEE Statistical Signal Processing Workshop*, Jun. 2016.
- [C39] **H. Zhu** and N. Li, “Asynchronous Local Voltage Control in Power Distribution Networks,” *Proc. Intl. Conf. on Acoustics, Speech and Signal Processing (ICASSP)*, Mar. 2016.
- [C38] C. Klauber and **H. Zhu**, “Distribution System State Estimation using Semidefinite Programming,” *Proc. IEEE NAPS*, Oct. 2015.
- [C37] Y. Liang, **H. Zhu**, and D. Chen, “Optimal Blocker Placement for Mitigating the Effects of

- Geomagnetic Induced Current Using Branch-and-Cut Algorithm,” *Proc. IEEE NAPS*, Oct. 2015.
- [C36] M. Kazerooni, **H. Zhu**, and T. J. Overbye, “Use of Sparse Magnetometer Measurements for Geomagnetically Induced Current Model Validation,” *Proc. IEEE NAPS*, Oct. 2015.
- [C35] P. Huynh, **H. Zhu**, and D. Aliprantis, “Non-intrusive parameter estimation for single-phase induction motors using transient data,” *Proc. of IEEE PECTI*, Feb. 2015.
- [C34] M. Kazerooni, **H. Zhu**, and T. J. Overbye, “Singular value decomposition in geomagnetically induced current validation,” *Proc. IEEE Innovative Smart Grid Technologies Conf.*, Feb. 2015.
- [C33] **H. Zhu**, “Power Network Flow Blocking for Mitigating the Effects of Geomagnetically Induced Currents,” *Proc. IEEE GlobalSIP*, pp. 862-866, Dec. 3-5, 2014.
- [C32] H.-J. Liu, R. Macwan, N. Alexander, and **H. Zhu**, “A Methodology to Analyze Conservation Voltage Reduction Performance Using Field Test Data,” *Proc. IEEE Intl Conf. on Smart Grid Comm. (SmartGridComm)*, pp. 535-540, Nov. 3-6, 2014.
- [C31] M. Hong and **H. Zhu**, “Power-Efficient Operation of Wireless Heterogeneous Networks using Smart Grids,” *Proc. IEEE SmartGridComm*, pp. 236-241, Nov. 3-6, 2014.
- [C30] M. Kazerooni, **H. Zhu**, and T. J. Overbye, “Dynamic modeling and filtering in geomagnetically induced current validation,” *Proc. 46th NAPS*, Sep. 7-9, 2014.
- [C29] S. Hossain, **H. Zhu**, and T. J. Overbye, “Distribution high impedance fault location using localized voltage magnitude measurements,” *Proc. 46th NAPS*, Sep. 7-9, 2014. (**3-place Best Student Paper**)
- [C28] M. Kazerooni, **H. Zhu**, and T. J. Overbye, “Literature review on the applications of data mining in power systems,” *Proc. IEEE Power and Energy Conference at Illinois (PECI)*, pp. 1-8, Feb. 22-23, 2014.
- [C27] **H. Zhu**, and Y. Shi, “Phasor Measurement Unit Placement for Identifying Power Line Outages in Wide-Area Transmission System Monitoring,” *Proc. 47th Hawaii Intl. Conf. System Sciences*, pp. 2483-2492, Jan. 2014.
- [C26] N. Prasad, H. Zhang, **H. Zhu**, and S. Rangarajan, “Multi-user MIMO scheduling in the fourth generation cellular uplink,” *Proc. Asilomar Conf. on Signals, Systems, and Computers*, pp. 1855-1859, Nov. 2013.
- [C25] B. A. Robbins, **H. Zhu**, and A. D. Dominguez-Garcia, “Optimal tap settings for voltage regulation transformers in distribution networks,” *Proc. 45th North America Power Symposium (NAPS)*, Sep. 2013.
- [C24] S. Hossain, **H. Zhu**, and T. J. Overbye, “Distribution Fault Location using Wide-Area Voltage Magnitude Measurements,” *Proc. 45th NAPS*, Sep. 2013.
- [C23] U. Bui, T. J. Overbye, K. Shetye, **H. Zhu**, and J. Weber, “Geomagnetically induced current sensitivity to assumed substation grounding resistance,” *Proc. 45th NAPS*, Sep. 2013.
- [C22] M. Kazerooni, **H. Zhu**, and T. J. Overbye, “Probabilistic modeling and reliability analysis for validating geomagnetically induced current data,” *Proc. 45th NAPS*, Sep. 2013.
- [C21] S. Mohapatra, **H. Zhu**, and T. J. Overbye, “Analysis of Electromechanical Disturbance Propagation in Power Systems,” *Proc. 2nd IEEE Symp. Computational Intelligence Applications in Smart Grid*, pp. 21-28, Apr. 15-19, 2013.
- [C20] S. Mohapatra, **H. Zhu**, and T. J. Overbye, “Frequency-domain Analysis of Electromechanical Disturbances in Electric Power Systems,” *Proc. IEEE Power and Energy Conference at Illinois (PECI)*, Feb. 22-23, 2013.
- [C19] M. Kazerooni, **H. Zhu**, K. Shetye, and T. J. Overbye, “Estimation of Geoelectric Field for Validating Geomagnetic Disturbance Modeling,” *Proc. IEEE PECTI*, Feb. 22-23, 2013.

- [C18] W. Jang, S. Mohapatra, T. J. Overbye, and **H. Zhu**, "Line Limit Preserving Power System Equivalent," *Proc. IEEE PECS*, Feb. 22-23, 2013.
- [C17] **H. Zhu**, N. Prasad, and S. Rangarajan, "Precoder design for weighted sum delay minimization in MIMO physical layer multicasting," *Proc. IEEE Global Communications Conf.*, pp. 2280-2285, Dec. 2012.
- [C16] **H. Zhu** and G. B. Giannakis, "Multi-area State Estimation using Distributed SDP for Non-linear Power Systems," *Proc. 3rd IEEE Intl Conf. on Smart Grid Comm. (SmartGridComm)*, pp. 626-628, Nov. 5-8, 2012 (invited).
- [C15] **H. Zhu** and G. B. Giannakis, "Robust power system state estimation for the nonlinear AC flow model," *Proc. 44th NAPS*, pp. 1-6, Sep. 2012.
- [C14] **H. Zhu**, N. Prasad, and S. Rangarajan, "Precoder Design for Physical Layer Multicasting," *Proc. IEEE Intl Conf. on Communications (ICC)*, pp. 2140-2144, Jun. 10-15, 2012.
- [C13] N. Prasad, H. Zhang, **H. Zhu**, and S. Rangarajan, "Multi-User Scheduling in the 3GPP LTE Cellular Uplink," *Proc. Intl. Symp. on Modeling and Opt. in Mobile, Ad Hoc, and Wireless Networks*, pp. 262-269, May 14-18, 2012.
- [C12] **H. Zhu** and G. B. Giannakis, "Lassoing Line Outages in the Smart Power Grid," *Proc. 2nd IEEE SmartGridComm*, pp. 570-575, Oct. 17-20, 2011.
- [C11] **H. Zhu** and G. B. Giannakis, "Estimating the State of AC Power Systems using Semidefinite Programming," *Proc. 43rd NAPS*, pp. 1-7, Aug. 4-6, 2011.
- [C10] E. Dall'Anese, J. A. Bazerque, **H. Zhu**, and G. B. Giannakis, "Group Sparse Total Least-Squares for Cognitive Spectrum Sensing," *Proc. Wrkshp. Signal Proc. Advances in Wireless Comms. (SPAWC)*, pp. 96-100, Jun. 26-29, 2011.
- [C9] **H. Zhu**, G. B. Giannakis, and G. Leus, "Weighted and Structured Sparse Total Least-Squares for Perturbed Compressive Sampling," *Proc. Intl. Conf. on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 3792-3795, May 22-27, 2011.
- [C8] G. B. Giannakis, G. Mateos, S. Farahmand, and **H. Zhu**, "USPACOR: Universal sparsity-controlling Outlier Rejection," *Proc. ICASSP*, pp. 1952-1955, May 22-27, 2011.
- [C7] **H. Zhu**, G. Leus, and G. B. Giannakis, "Sparse Regularized Total Least-Squares for Sensing Applications," *Proc. SPAWC*, pp. 1-5, June 20-23, 2010. (**Best Student Paper Finalist**)
- [C6] **H. Zhu**, G. Mateos, G. B. Giannakis, N. D. Sidiropoulos, and A. Banerjee "Sparsity-Exploiting Overlapping Co-Clustering for Behavior Inference in Social Networks," *Proc. ICASSP*, pp. 3534-3537, March 14-19, 2010.
- [C5] **H. Zhu** and G. B. Giannakis, "Sparsity-Embracing Multiuser Detection for CDMA Systems with Low Activity Factor," *Proc. IEEE Intl Symposium on Information Theory (ISIT)*, pp. 164-168, June 28-July 3, 2009.
- [C4] **H. Zhu**, A. Cano and G. B. Giannakis, "Distributed Demodulation Using Consensus Averaging in Wireless Sensor Networks", *Proc. Asilomar Conf. on Signals, Systems, and Computers*, pp. 1170 - 1174, Oct. 26-29, 2008.
- [C3] **H. Zhu**, A. Cano and G. B. Giannakis, "In-Network Channel Decoding Using Consensus on Log-Likelihood Ratio Averages", *Proc. 42nd Conference on Information Sciences and Systems (CISS)*, pp. 1058-1063, Mar. 19-21, 2008.
- [C2] **H. Zhu**, A. Cano and G. B. Giannakis, "Consensus-Based Distributed MIMO Decoding Using Semidefinite Relaxation", *Proc. 2nd IEEE Workshop on Computational Advances in Multi-Channel Sensor Array Processing (CAMSAP)*, pp. 201-204, Dec. 12-14, 2007.
- [C1] **H. Zhu**, I. D. Schizas and G. B. Giannakis, "Power-Efficient Dimensionality Reduction for Distributed Channel-Aware Kalman Tracking Using Wireless Sensor Networks," *IEEE Stat. Signal Process.*, pp. 383-387, Aug. 25-29, 2007.