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Degrees

Ph.D.-E.E.	May 2000	Cornell University, Ithaca NY
M.S.-E.E.	Aug 1993	University of Illinois, Urbana IL
B.S.-E.E.	May 1992 (magna cum laude)	University of Illinois, Urbana IL

Professional Experience

Professor, 9/2013–present — The Ohio State University, Columbus
Research focus on machine learning, signal processing, and communications.

Visiting Professor, 8/2016–5/2017 — Duke University, Durham NC
Research focus on signal processing and machine learning.

Visiting Professor, 3/2009–8/2009 — Supélec, Gif-sur-Yvette, France
Research focus on communications, signal processing, and networking.

Visiting Professor, 10/2008–2/2009 — Eurecom, Sophia Antipolis, France
Research focus on communications, signal processing, and networking.

Associate Professor, 10/2005–8/2013 — The Ohio State University, Columbus
Research focus on communications, signal processing, networking, and machine learning.

Assistant Professor, 10/2000–9/2005 — The Ohio State University, Columbus
Research focus on signal processing for communication systems.

Systems Engineer, 8/1993–6/1996 — Tektronix Inc., Beaverton OR
Developed signal processing algorithms, software, and system designs for video, communications, and general purpose instrumentation.

Awards and Honors

- **OSU ECE Department Outstanding Teaching Award, Fall 2020**
- **2018 Qualcomm Faculty Award**
- **2017 Qualcomm Faculty Award**
- **IEEE Signal Processing Society Best Paper Award** for "Bilinear Generalized Approximate Message Passing," 2016.
- **IEEE Fellow** "for contributions to signal processing in communications," 2014.
- **Educational modules at cnx.org downloaded over 1 million times**.
- **Advisor of Student-Paper-Award Finalist**, IEEE CAMSAP Conference 2013.
- **Advisor of OSU Hayes Graduate-Research-Forum 1st-Place Winner**, 2012.
- **Advisor of OSU Presidential Fellowship Winner**, 2009.
- **Best Paper Award**, IEEE SPAWC Conference 2005.
- **Advisor of Student-Paper-Award Finalist**, IEEE ICASSP Conference 2005.
- **OSU College of Engineering Lumley Research Award**, 2005.
- **National Science Foundation CAREER Award**, 2003.
- **Prize Paper Award** for "Efficiency based optimal control of Kaplan hydrogenerators" from the IEEE Energy Development and Power Generation Committee, 1999.
- **Intel Foundation Fellowship**, 1998-1999.

- **Schlumberger Foundation Fellowship**, Spring Term 1998.
- **Tektronix President's Award**, 1996.
- **James Scholar, University of Illinois Urbana-Champaign**, 1988-1992.
- **National Merit Scholarship**, 1988-1992.

Journal Publications

1. S. K. Shastri, R. Ahmad, C. A. Metzler, and P. Schniter, "Denoising Generalized Expectation-Consistent Approximation for MR Image Recovery," *IEEE Journal on Selected Areas in Information Theory*, vol. 3, no. 3, pp. 528-542, Sep. 2022.
2. P. Pandit, M. Sahraee-Ardakan, S. Rangan, P. Schniter, and A. K. Fletcher, "Matrix Inference and Estimation in Multi-layer Models," *Journal of Statistical Mechanics: Theory and Experiment*, vol. 2021, no. 12, pp. 124004, Dec. 2021.
3. C. Chen, Y. Liu, P. Schniter, M. Tong, K. Zareba, O. Simonetti, L. Potter, and R. Ahmad, "OCMR (v1.0)–Open-Access Multi-Coil k-Space Dataset for Cardiovascular Magnetic Resonance Imaging," (Available at `https://arxiv.org/abs/2008.03410`)
4. R. Gribonval, A. Chatalic, N. Keriven, V. Schellekens, L. Jacques, and P. Schniter, "Sketching Datasets for Large-Scale Learning," *IEEE Signal Processing Magazine*, vol. 38, no. 5, pp. 12-36, 2021.
5. K.-H. Ngo, M. Guillaud, A. Decurninge, S. Yang, and P. Schniter, "Multi-User Detection Based on Expectation Propagation for the Non-Coherent SIMO Multiple Access Channel," *IEEE Transactions on Wireless Communications*, vol. 19, no. 9, p. 6145-6161, Sep. 2020.
6. P. Schniter, "A Simple Derivation of AMP and its State Evolution via First-Order Cancellation," *IEEE Transactions on Signal Processing*, vol. 68, pp. 4283-4292, 2020.
7. P. Pandit, M. Sahraee-Ardakan, S. Rangan, P. Schniter, and A. K. Fletcher, "Inference with Deep Generative Priors in High Dimensions," *IEEE Journal on Selected Areas in Information Theory*, vol. 1, no. 1, pp. 336-347, May 2020.
8. R. Ahmad, C. A. Bouman, G. T. Buzzard, S. Chan, S. Liu, E. T. Reehorst, and P. Schniter, "Plug and play methods for magnetic resonance imaging," *IEEE Signal Processing Magazine*, vol. 37, no. 1, pp. 105-116, Jan. 2020. (Longer version available at `http://arxiv.org/abs/1903.08616`)
9. A. K. Fletcher, P. Panda, S. Rangan, S. Sarkar, and P. Schniter, "Plug-in Estimation in High-Dimensional Linear Inverse Problems: A Rigorous Analysis," *Journal of Statistical Mechanics: Theory and Experiment*, vol. 2019, no. 12, pp. 124021, Dec. 2019.
10. S. Rangan, P. Schniter, and A. K. Fletcher, "Vector Approximate Message Passing," *IEEE Transactions on Information Theory*, vol. 65, no. 10, pp. 6664-6684, Oct 2019.
11. E. Byrne, A. Chatalic, R. Gribonval, and P. Schniter, "Sketched Clustering via Hybrid Approximate Message Passing," *IEEE Transactions on Signal Processing*, vol. 67, no. 17, pp. 4556-4569, Sep 2019.
12. S. Rangan, P. Schniter, A. K. Fletcher, and S. Sarkar , "On the Convergence of Approximate Message Passing with Arbitrary Matrices," *IEEE Transactions on Information Theory*, vol. 65, no. 9, pp. 5339-5351, Sep 2019.
13. P. Schniter and E. Byrne , "Adaptive Detection of Structured Signals in Low-Rank Interference," *IEEE Transactions on Signal Processing*, vol. 67, no. 13, pp. 3439-3454, July 2019.
14. S. Sarkar, A. K. Fletcher, S. Rangan, and P. Schniter, "Bilinear Recovery using Adaptive Vector-AMP," *IEEE Transactions on Signal Processing*, vol. 67, no. 13, pp. 3383-3396, July 2019.
15. E. T. Reehorst and P. Schniter, "Regularization by Denoising: Clarifications and New Interpretations," *IEEE Transactions on Computational Imaging*, vol. 5, no. 1, pp. 52-67, Mar 2019.
16. P. Sun, Z. Wang, R. W. Heath Jr., and P. Schniter, "Joint Channel-Estimation/Decoding with Frequency-Selective Channels and Few-Bit ADCs," *IEEE Transactions on Signal*

Processing, vol. 67, no. 4, pp. 899-914, Feb 2019.

17. C. Chen, Y. Liu, P. Schniter, N. Jin, J. Craft, O. Simonetti, and R. Ahmad, "Sparsity Adaptive Reconstruction for Highly Accelerated Cardiac MRI," *Magnetic Resonance in Medicine*, vol. 81, pp. 3875-3887, Jan 2019.
18. P. Sun, Z. Wang, and P. Schniter, "Joint Channel-Estimation and Equalization of Single-Carrier Systems via Bilinear AMP," *IEEE Transactions on Signal Processing*, vol. 66, no. 10, pp. 2772-2785, May 2018.
19. J. Mo, P. Schniter, and R. W. Heath Jr., "Channel Estimation in Broadband Millimeter Wave MIMO Systems with Few-Bit ADCs," *IEEE Transactions on Signal Processing*, vol. 66, no. 5, pp. 1141-1154, Mar. 2018.
20. M. Al-Shoukairi, P. Schniter, and B. D. Rao, "A GAMP Based Low Complexity Sparse Bayesian Learning Algorithm," *IEEE Transactions on Signal Processing*, vol. 66, no. 2, pp. 294-308, Jan. 2018.
21. S. Rangan, A. K. Fletcher, V. K. Goyal, E. Byrne, and P. Schniter "Hybrid Approximate Message Passing," *IEEE Transactions on Signal Processing*, vol. 65, no. 17, pp. 4577-4592, Sep. 2017.
22. M. Borgerding, P. Schniter, and S. Rangan, "AMP-Inspired Deep Networks for Sparse Linear Inverse Problems," *IEEE Transactions on Signal Processing*, vol. 65, no. 16, pp. 4293 - 4308, Aug. 2017.
23. S. Rangan, A. K. Fletcher, P. Schniter, and U. Kamilov, "'Inference for Generalized Linear Models via Alternating Directions and Bethe Free Energy Minimization," *IEEE Transactions on Information Theory*, vol. 63, no. 1, pp. 676 - 697, Jan. 2017.
24. C. Schulke, P. Schniter, and L. Zdeborova, "Phase diagram of matrix compressed sensing," *Physical Review E*, vol. 94, no. 6, pp. 062136(1-16), Dec. 2016.
25. S. Rangan, P. Schniter, E. Riegler, A. Fletcher, and V. Cevher, "Fixed Points of Generalized Approximate Message Passing with Arbitrary Matrices," *IEEE Transactions on Information Theory*, vol. 62, no. 12, pp. 7464-7474, Dec. 2016.
26. E. Byrne and P. Schniter, "Sparse Multinomial Logistic Regression via Approximate Message Passing," *IEEE Transactions on Signal Processing*, vol. 64, no. 21, pp. 5485-5498, Nov. 2016.
27. J. T. Parker and P. Schniter, "Parametric Bilinear Generalized Approximate Message Passing," *IEEE Journal of Selected Topics in Signal Processing: Special Issue on Structured Matrices in Signal and Data Processing*, vol. 10, no. 4, pp. 795-808, June 2016. (Longer version at `http://arxiv.org/abs/1508.07575`)
28. M. Pereyra, P. Schniter, E. Chouzenoux, J.-C. Pesquet, J.-Y. Tourneret, A. O. Hero and S. McLaughlin, "Tutorial on Stochastic Simulation and Optimization Methods in Signal Processing," *IEEE Journal of Selected Topics in Signal Processing: Special issue on Stochastic Simulation and Optimisation in Signal Processing*, vol. 10, no. 2, pp. 224-241, Mar. 2016.
29. R. Ahmad and P. Schniter, "Iteratively Reweighted L1 Approaches to Sparse Composite Regularization," *IEEE Transactions on Computational Imaging*, vol. 1, no. 4, pp. 220-235, Dec. 2015.
30. J. P. Vila , P. Schniter, and J. Meola, "Hyperspectral Unmixing via Turbo Bilinear Approximate Message Passing," *IEEE Transactions on Computational Imaging*, vol. 1, no. 3, pp. 143-158, Sep. 2015.
31. J. Ziniel, P. Schniter, and P. Sederberg, "Binary Linear Classification and Feature Selection via Generalized Approximate Message Passing," *IEEE Transactions on Signal Processing*, vol. 63, no. 8, pp. 2020-2032, Apr. 2015.
32. P. Schniter and S. Rangan, "Compressive Phase Retrieval via Generalized Approximate Message Passing," *IEEE Transactions on Signal Processing*, vol. 63, no. 4, pp. 1043-1055, Feb. 2015.

33. J. T. Parker , P. Schniter, and V. Cevher, "Bilinear Generalized Approximate Message Passing—Part I. Derivation," *IEEE Transactions on Signal Processing*, vol. 62, no. 22, pp. 5839-5853, Nov. 2014.
34. J. T. Parker , P. Schniter, and V. Cevher, "Bilinear Generalized Approximate Message Passing—Part II. Applications," *IEEE Transactions on Signal Processing*, vol. 62, no. 22, pp. 589-5867, Nov. 2014.
35. A. Sabharwal, P. Schniter, D. Guo, D. W. Bliss, S. Rangarajan, and R. Wichman, "In-band Full-duplex Wireless: Challenges and Opportunities," *IEEE Journal on Selected Areas in Communications, Special Issue on Full-duplex Wireless Communications and Networks*, vol. 31, no. 9, pp. 1637-1652, Sep. 2014.
36. A. Sabharwal, P. Schniter, D. Guo, D. W. Bliss, S. Rangarajan, and R. Wichman, "Guest Editorial: In-band Full-duplex Wireless Communications and Networks," *IEEE Journal on Selected Areas in Communications, Special Issue on Full-duplex Wireless Communications and Networks*, vol. 31, no. 9, pp. 1633-1636, Sep. 2014.
37. J. P. Vila and P. Schniter, "An Empirical-Bayes Approach to Recovering Linearly Constrained Non-Negative Sparse Signals," *IEEE Transactions on Signal Processing*, vol. 62, no. 18, pp. 4689-4703, Sep. 2014.
38. M. Nassar, P. Schniter, and B. Evans, "A Factor-Graph Approach to Joint OFDM Channel Estimation and Decoding in Impulsive Noise Environments," *IEEE Transactions on Signal Processing*, vol. 62, no. 6, pp. 1576-1589, Mar. 2014.
39. J. Ziniel and P. Schniter, "Dynamic Compressive Sensing of Time-Varying Signals via Approximate Message Passing," *IEEE Transactions on Signal Processing*, vol. 61, no. 21, pp. 5270-5284, Nov. 2013.
40. J. P. Vila and P. Schniter, "Expectation-Maximization Gaussian-Mixture Approximate Message Passing," *IEEE Transactions on Signal Processing*, vol. 61, no. 19, pp. 4658-4672, Oct. 2013.
41. J. Ziniel and P. Schniter, "Efficient High-Dimensional Inference in the Multiple Measurement Vector Problem," *IEEE Transactions on Signal Processing*, vol. 61, no. 2, pp. 340-354, Jan. 2013.
42. R. Aggarwal, C. E. Koksal, and P. Schniter, "On the Design of Large Scale Wireless Systems," *IEEE Journal on Selected Areas in Communications: Special Issue on Large-Scale Multiple Antenna Wireless Systems*, vol. 31, no. 2, pp. 215-225, Feb. 2013.
43. B. Day, A. R. Margetts, D. W. Bliss, and P. Schniter, "Full-Duplex MIMO Relaying: Achievable Rates under Limited Dynamic Range," *IEEE Journal on Selected Areas in Communications: Special Issue on Theories and Methods for Advanced Wireless Relays*, vol. 30, no. 8, pp. 1541-1553, Aug. 2012.
44. B. Day, A. R. Margetts, D. W. Bliss, and P. Schniter, "Full-Duplex Bidirectional MIMO: Achievable Rates under Limited Dynamic Range," *IEEE Transactions on Signal Processing*, vol. 60, no. 7, pp. 3702-3713, July 2012.
45. S. Som and P. Schniter, "Compressive Imaging using Approximate Message Passing and a Markov-Tree Prior," *IEEE Transactions on Signal Processing*, vol. 60, no. 7, pp. 3439-3448, July 2012.
46. R. Aggarwal, C. E. Koksal, and P. Schniter, "Joint Scheduling and Resource Allocation in OFDMA Downlink Systems via ACK/NAK Feedback," *IEEE Transactions on Signal Processing*, vol. 60, no. 6, pp. 3217-3227, June 2012.
47. C. E. Koksal and P. Schniter, "Robust Rate-Adaptive Wireless Communication Using ACK/NAK-Feedback," *IEEE Transactions on Signal Processing*, vol. 60, no. 4, pp. 1752-1765, Apr. 2012.
48. P. Schniter, "Belief-Propagation-based Joint Channel Estimation and Decoding for Spectrally Efficient Communication over Unknown Sparse Channels," *Physical Communication: Special Issue in Compressive Sensing in Communications (Elsevier)*, vol. 5, no. 3,

pp. 91-101, Mar. 2012.

49. S. Murugesan, P. Schniter, and N. Shroff, "Multiuser Scheduling in a Markov-Modeled Downlink using Randomly Delayed ARQ Feedback," *IEEE Transactions on Information Theory*, vol. 58, no. 2, pp. 1025-1042, Feb. 2012.
50. P. Schniter, "A Message-Passing Receiver for BICM-OFDM over Unknown Clustered-Sparse Channels," *IEEE Journal of Selected Topics in Signal Processing: Special issue on Soft Detection for Wireless Transmission*, vol. 5, no. 8, pp. 1462-1474, Dec. 2011.
51. R. Aggarwal, M. Assaad, C. E. Koksal, and P. Schniter, "Optimal Joint Scheduling and Resource Allocation in OFDMA Downlink Systems with Imperfect Channel-State Information," *IEEE Transactions on Signal Processing*, vol. 59, pp. 5589–5604, Nov. 2011.
52. A. P. Kannu and P. Schniter, "On Communication over Unknown Sparse Frequency-Selective Block-Fading Channels," *IEEE Transactions on Information Theory*, vol. 57, no. 10, pp. 6619-6632, Oct 2011.
53. A. P. Kannu and P. Schniter, "On the Spectral Efficiency of Noncoherent Doubly Selective Block-Fading Channels," *IEEE Transactions on Information Theory*, vol. 56, no. 6, pp. 2829-2844, June 2010.
54. R. Aggarwal, P. Schniter, and C. E. Koksal, "Rate Adaptation via Link-Layer Feedback for Goodput Maximization over a Time-Varying Channel," *IEEE Transactions on Wireless Communications*, vol. 8, no. 8, pp. 4276-4285, Aug. 2009.
55. S.-J. Hwang and P. Schniter, "Efficient Multicarrier Communication for Highly Spread Underwater Acoustic Channels," *IEEE Journal on Selected Areas in Communications*, vol. 26, no. 9, pp. 1674-1683, Dec. 2008.
56. H. Liu and P. Schniter, "Iterative Frequency-Domain Channel Estimation and Equalization for Single-Carrier Transmissions without Cyclic-Prefix," *IEEE Transactions on Wireless Communications*, vol. 7, no. 10, pp. 3686-3691, Oct. 2008.
57. K. Azarian, H. El Gamal and P. Schniter, "On the Optimality of the ARQ-DDF Protocol," *IEEE Transactions on Information Theory*, vol. 54, no. 6, pp. 1718-1724, Apr. 2008.
58. A. P. Kannu and P. Schniter, "Design and Analysis of MMSE Pilot-Aided Cyclic-Prefixed Block Transmission for Doubly Selective Channels," *IEEE Transactions on Signal Processing*, vol. 56, no. 3, pp. 1148-1160, Mar. 2008
59. A. R. Margetts, P. Schniter, and A. Swami, "Joint Scale-Lag Diversity in Wideband Mobile Direct Sequence Spread Spectrum Systems," *IEEE Transactions on Wireless Communications*, vol. 6, no. 12, pp. 4308-4319, Dec. 2007.
60. S. Das and P. Schniter, "Max-SINR ISI/ICI-Shaping Multi-Carrier Modulation for the Doubly Dispersive Channel," *IEEE Transactions on Signal Processing*, vol. 55, no. 12, pp. 5782-5795, Dec. 2007.
61. S. Murugesan, E. Uysal-Biyikoglu and P. Schniter, "Optimization of Training and Scheduling in the Non-Coherent MIMO Multiple-Access Channel," *IEEE Journal on Selected Areas in Communications*, vol. 25, no. 7, pp. 1446-1456, Sep. 2007.
62. S.-J. Hwang and P. Schniter, "Efficient Sequence Detection of Multi-Carrier Transmissions over Doubly Dispersive Channels," *EURASIP Journal on Applied Signal Processing: Special issue on Reliable Communications over Rapidly Time-Varying Channels*, article ID 93638, 17 pages, 2006.
63. K. Azarian, H. El Gamal, and P. Schniter, "On the Achievable Diversity-Multiplexing Tradeoff in Half-Duplex Cooperative Channels," *IEEE Trans. on Information Theory*, vol. 51, no. 12, pp. 4152-4172, Dec. 2005.
64. A. R. Margetts and P. Schniter, "Chip-rate Adaptive Linear Equalization of Scrambled Downlink CDMA," *IEEE Trans. on Signal Processing*, vol. 53, no. 6, pp. 2205-2215, June 2005.
65. B. Bhukania and P. Schniter, "On the Robustness of Decision-feedback Detection of

DPSK and Differential Unitary Space-Time Modulation in Rayleigh-Fading Channels," *IEEE Trans. on Wireless Communications*, vol. 3, no. 5, pp. 1481-1489, Sep. 2004.

66. P. Schniter, "Low-Complexity Equalization of OFDM in Doubly-Selective Channels," *IEEE Transactions on Signal Processing*, vol. 52, no. 4, pp. 1002-1011, Apr. 2004.
67. B. D. Rigling and P. Schniter, "Subspace Leaky LMS," *IEEE Signal Processing Letters*, vol. 11, no. 2, pp. 136-139, Jan. 2004.
68. W. Chen, U. Mitra, and P. Schniter, "On the Equivalence of Three Reduced Rank Linear Estimators with Applications to DS-CDMA," *IEEE Trans. on Information Theory*, vol. 48, no. 9, pp. 2609-2614, Sep. 2002.
69. P. Schniter and L. Tong, "Existence and Performance of Shalvi-Weinstein Estimators," *IEEE Trans. on Signal Processing*, vol. 49, no. 9, pp. 2031-2041, Sep. 2001.
70. P. Schniter, R.A. Casas, A. Touzni, and C.R. Johnson, Jr., "Performance Analysis of Godard-Based Channel Identification," *IEEE Trans. on Signal Processing*, vol. 49, no. 8, pp. 1757-1767, Aug. 2001.
71. P. Schniter and C.R. Johnson, Jr., "Bounds for the MSE Performance of Constant Modulus Estimators," *IEEE Trans. on Information Theory*, vol. 46, no. 7, pp. 2544-2560, Nov. 2000.
72. P. Schniter and C.R. Johnson, Jr., "Sufficient Conditions for the Local Convergence of Constant Modulus Algorithms," *IEEE Trans. on Signal Processing*, vol. 48, no. 10, pp. 2785-2796, Oct. 2000.
73. P. Schniter and C.R. Johnson, Jr., "Dithered Signed-Error CMA: Robust, Computationally Efficient Blind Adaptive Equalization," *IEEE Trans. on Signal Processing*, vol. 47, no. 6, pp. 1592-1603, June 1999.
74. C.R. Johnson, Jr., P. Schniter, T.J. Endres, J.D. Behm, D.R. Brown, and R.A. Casas, "Blind Equalization Using the Constant Modulus Criterion: A Review," in *Proc. of the IEEE: Special Issue on Blind System Identification and Estimation*, vol. 86, no. 10, pp. 1927-50, Oct. 1998.
75. P. Schniter and L. Wozniak, "Efficiency Based Optimal Control of Kaplan Hydrogenerators," *IEEE Transactions on Energy Conversion*, vol. 10, no. 2, pp. 348-53, June 1995.

Highly Selective Conference Publications

1. M. Bendel, R. Ahmad, and P. Schniter, "A Regularized Conditional GAN for Posterior Sampling in Image Recovery Problems," *Proc. Neural Information Processing Systems Conference (NeurIPS)* (New Orleans, LA), 2023. [3218/12343=26.1% acceptance rate]
2. J. Wen, R. Ahmad, and P. Schniter, "Posterior Sampling for Accelerated Multicoil MRI Reconstruction using a Conditional Normalizing Flow," *Proc. Intl. Conf. Machine Learning (ICML)* (Honolulu, HI), 2023. [1827/6538=27.9% acceptance rate]
3. P. Pandit, M Sahraee-Ardakan, S. Rangan, P. Schniter, and A. K. Fletcher, "Matrix Inference and Estimation in Multi-Layer Models," *Proc. Neural Information Processing Systems Conference (NeurIPS)* (Virtual), Dec. 2020. [1903/9467=20% acceptance rate]
4. A. K. Fletcher, S. Rangan, S. Sarkar, and P. Schniter, "Plug-in Estimation in High-Dimensional Linear Inverse Problems: A Rigorous Analysis," *Proc. Neural Information Processing Systems Conference (NeurIPS)* (Montreal, Canada), Dec. 2018. [1011/4865=21% acceptance rate]
5. C. A. Metzler, P. Schniter, A. Veeraraghavan, and R. G. Baraniuk, "prDeep: Robust Phase Retrieval with Flexible Deep Neural Networks," *Proc. Intl. Conf. Machine Learning (ICML)*, (Stockholm, Sweden), July 2018. [621/2473=25% acceptance rate]
6. A. Fletcher, M. Sahraee-Ardakan, S. Rangan, and P. Schniter, "Rigorous Dynamics and Consistent Estimation in Arbitrarily Conditioned Linear Systems," *Conf. on Neural Information Processing Systems (NeurIPS)* (Long Beach, CA), Dec. 2017. [679/3240=21% acceptance rate]
7. R. Aggarwal, C. E. Koksal, and P. Schniter, "Scaling Laws and Design Principles for Multi-Cellular Wireless OFDMA Systems," *Proc. IEEE International Conference on Computer*

Communications (INFOCOM), (Orlando, FL), Mar. 2012. [278/1547=18% acceptance rate]

Conference Publications

1. X. Lei, C. Chen, P. Schniter, and R. Ahmad, "An open-source implementation of surface coil intensity correction," *Proc. Global Cardiovascular Magnetic Resonance Conference (CMR)* (London), Jan. 2024, to appear.
2. S.K. Shastri and P. Schniter, "Phase Retrieval via Deep Expectation-Consistent Approximation," *NeurIPS Workshop on Deep Inverse Problems* (New Orleans, LA), Dec. 2023.
3. M.C. Bendel, R. Ahmad, and P. Schniter, "Mask-Agnostic Posterior Sampling MRI via Conditional GANs with Guided Reconstruction," *NeurIPS Workshop on Deep Inverse Problems* (New Orleans, LA), Dec. 2023.
4. S.K. Shastri, R. Ahmad, and P. Schniter, "TurboDeep: A Turbo Inference Framework for Nonlinear Inverse Problems," *Proc. Asilomar Conf. on Signals, Systems, and Computers* (Pacific Grove, CA), Oct. 2023, to appear.
5. S. Nair and P. Schniter, "An Improved Spline-Based Learned Convex Regularizer for Image Recovery," *Proc. Asilomar Conf. on Signals, Systems, and Computers* (Pacific Grove, CA), Oct. 2023, to appear.
6. J. Wen, R. Ahmad, and P. Schniter, "Posterior Sampling for Accelerated Multicoil MRI Reconstruction using a Conditional Normalizing Flow," *Proc. Intl. Soc. Magnetic Resonance in Medicine (ISMRM)* (Toronto), June 2023.
7. M. Bendel, R. Ahmad, and P. Schniter, "A Regularized Conditional GAN for Posterior Sampling in MR Image Reconstruction," *Proc. Intl. Soc. Magnetic Resonance in Medicine (ISMRM)* (Toronto), June 2023.
8. S. Liu, P. Schniter, and R. Ahmad, "Recovery with self-calibrated denoisers from multiple undersampled images (ReSiDe-M)," *Proc. Intl. Soc. Magnetic Resonance in Medicine (ISMRM)* (Toronto), June 2023.
9. S.K. Shastri, R. Ahmad, C. Metzler, and P. Schniter, "Expectation Consistent Plug-and-Play for MRI," *Proc. IEEE Internat. Conf. on Acoust., Speech, and Signal Processing (ICASSP)*, (Singapore), May 2022.
10. S. Liu, P. Schniter, and R. Ahmad, "MRI Recovery with a Self-Calibrated Denoiser," *Proc. IEEE Internat. Conf. on Acoust., Speech, and Signal Processing (ICASSP)* (Singapore), May 2022.
11. S. Liu, P. Schniter, and R. Ahmad, "Image reconstruction with a self-calibrated denoiser," *Proc. Intl. Soc. Magnetic Resonance in Medicine (ISMRM)* (London), May 2022.
12. S.K. Shastri, R. Ahmad, C. Metzler, and P. Schniter, "Matching Plug-and-Play Algorithms to the Denoiser," *NeurIPS Workshop on Deep Inverse Problems*, (virtual), Dec. 2021.
13. M. K. Wharton, A. M. Pavy, and P. Schniter, "Deep Neural Networks for Radar Waveform Classification," *Proc. Asilomar Conf. on Signals, Systems, and Computers*, (virtual), Nov. 2021.
14. S. Sarkar, R. Ahmad, and P. Schniter, "MRI Image Recovery using Damped Denoising Vector AMP," *Proc. IEEE Internat. Conf. on Acoust., Speech, and Signal Processing (ICASSP)*, (virtual), May 2021.
15. S. K. Shastri, R. Ahmad, and P. Schniter, "Autotuning Plug-and-Play Algorithms for MRI," *Proc. Asilomar Conf. on Signals, Systems, and Computers*, (virtual), Nov. 2020.
16. S. Liu, N. Jin, P. Schniter, and R. Ahmad, "A Parameter-free Plug-and-Play Method for Accelerated MRI Reconstruction," *Intl. Soc. Magnetic Resonance in Medicine (ISMRM)*, (virtual), Aug. 2020.
17. P. Schniter, "A Simple Derivation of AMP and its State Evolution via First-Order Cancellation," *Proc. Internat. Conf. on Acoust., Speech, and Signal Processing*, (virtual), May 2020.
18. S. Liu, E. Reehorst, P. Schniter, and R. Ahmad, "Free-breathing Cardiovascular MRI

Using a Plug-and-Play Method with Learned Denoiser," *IEEE International Symposium on Biomedical Imaging (ISBI)*, (virtual), Apr. 2020.

19. P. Schniter, S. Sarkar, and R. Ahmad, "Plug-and-play AMP for Image Recovery with Fourier-Structured Operators," *IS&T Intl. Symposium Electronic Imaging* (Burlingame, CA), Jan. 2020.
20. K.-H. Ngo, M. Guillaud, A. Decurninge, S. Yang, S. Sarkar, and P. Schniter, "Non-Coherent Multi-User Detection Based on Expectation Propagation," *Proc. Asilomar Conf. on Signals, Systems, and Computers* (Pacific Grove, CA), Nov. 2019.
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Book Chapters

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Patents

1. "Conditional Generative Adversarial Network (cGAN) for Posterior Sampling and Related Methods, by M.C. Bendel, R. Ahmad, and P. Schniter, Patent Application No. 18/513006, Nov. 17, 2023.
2. "Electrical Signal Jitter and Wander Measurement System and Method," by S.F. Blazo, J.A. Kleck, A. Konynenberg, and P. Schniter, *U.S. Patent No. 5,757,652*, May 1998.

Funded Research Grants

1. "Sequential Learning" *AFRL*, $40,000, May 31, 2022 – Dec. 21, 2022. (100% responsibility).
2. "Learning with confidence for multi-sensor exploitation," *AFRL*, $400,000, Sep. 27, 2021 – Sep. 30, 2025 (100% responsibility).
3. "A comprehensive deep learning framework for MRI reconstruction," *National Institutes for Health: R01*, $2,300,000, July 1, 2021 – March 31, 2025 (20% responsibility)
4. "Sequential Learning" *AFRL*, $45,000, Jan. 1, 2021 – May. 31, 2022 (100% responsibility).
5. "Learning and Inference in High-Dimensional Models: Rigorous Analysis and Applications," *National Science Foundation: CIF Medium*, $900,000, July 1, 2020 – June 30, 2024 (50% responsibility)
6. "Deep Networks for Radar Classification and Detection" *National Science Foundation I/UCRC*, $50,000, Sep. 1, 2020 – May 31, 2021 (100% responsibility).
7. "Adversarial Attacks on Deep Modulation Classifiers" *National Science Foundation I/UCRC*, $43,000, Sep. 1, 2019 – Aug. 31, 2020 (100% responsibility).
8. "Quantifying Uncertainty in Deep Neural Networks" *National Science Foundation I/UCRC*, $43,000, Sep. 1, 2019 – Aug. 31, 2020 (100% responsibility).
9. "Directional Networking Research," *MIT Lincoln Labs*, $51,177, Jan. 1, 2019 – May 31, 2019 (100% responsibility).
10. "Merging Deep Networks with Algorithms for Imaging Inverse-Problems," *National Science Foundation I/UCRC*, $43,000, Sep. 1, 2018 – Aug. 31, 2019 (100% responsibility).
11. "Approximate Message Passing Algorithms and Deep Networks," *National Science Foundation: CIF Small*, $499,570, Sep. 1, 2017 – Aug. 31, 2020 (100% responsibility)
12. "A New Paradigm for Rapid, Accurate Cardiac Magnetic Resonance Imaging," *National Institutes of Health: R01*, $2,704,072, July 1, 2017 – June 30, 2022 (20% responsibility)
13. "Directional Networking among Fast Moving Platforms," *MIT Lincoln Labs*, $150,179, Jan. 1, 2017 – Dec. 31, 2017 (100% responsibility).
14. "Deep Learning for Sparse Linear Inverse Problems," *National Science Foundation I/UCRC*, $43,000, Sep. 1, 2016 – Aug. 31, 2017 (100% responsibility).
15. "Directional Networking among Fast Moving Platforms," *MIT Lincoln Labs*, $100,000, Oct. 1, 2015 – Sep. 30, 2016 (100% responsibility).
16. "Correlation-Free Passive Radar," *National Science Foundation I/UCRC*, $43,000, Sep. 1, 2015 – Aug. 31, 2016 (100% responsibility).
17. "Next Generation Communications with Low-Resolution ADCs: Fundamentals and Practical Design," *National Science Foundation: CIF Small*, $500,000, Sep. 1, 2015 – Aug. 31, 2018 (50% responsibility)
18. "Imaging and Classification via Multiresolution Sensor Fusion," *National Science Foundation I/UCRC*, $43,000, Sep. 1, 2014 – Aug. 31, 2015 (100% responsibility).
19. "MIMO Simultaneous Transmission and Reception: Theory and Practice," *MIT Lincoln Labs*, $50,232, Feb. 1, 2014 – July 31, 2014 (100% responsibility).
20. "Hyperspectral Imaging via Bilinear Generalized Approximate Message Passing," *National Science Foundation I/UCRC*, $44,000, Oct. 1, 2013 – Sep. 30, 2014 (100% responsibility).
21. "MIMO Simultaneous Transmission and Reception: Theory and Practice," *MIT Lincoln Labs*, $79,894, Feb. 1, 2013 – Jan. 31, 2014 (100% responsibility).
22. "Message-Passing Strategies for High-Dimensional Inference," *National Science Foundation: CIF Small*, $162,055, Oct. 1, 2012 – Feb. 28, 2016 (100% responsibility).

23. "Hyperspectral Imaging via Bilinear Generalized Approximate Message Passing," *National Science Foundation I/UCRC*, $44,000, Oct. 1, 2012 – Sep. 30, 2013 (100% responsibility).
24. "MIMO Simultaneous Transmission and Reception: Theory and Practice," *MIT Lincoln Labs*, $99,955, Feb. 1, 2012 – Jan. 31, 2013 (100% responsibility).
25. "Compressed Sensing the Brain: Inferring sparse spatio-temporal neural sources for improved analysis of cognitive states," *OSU Center for Cognitive Science*, $26,838, Jan. 1, 2012 – Dec. 31, 2012 (50% responsibility).
26. "Radar Imaging via Exploitation of Structured Sparsity," *National Science Foundation I/UCRC*, $22,000, Oct. 1, 2011 – Sep. 30, 2012 (100% responsibility).
27. "MIMO Simultaneous Transmission and Reception: Leveraging the MIMO Interference Channel," *MIT Lincoln Labs*, $99,990, Feb. 1, 2011 – Jan. 31, 2012 (100% responsibility).
28. "Active Sensing via Compressive Illumination," *DARPA KeCOM*, $2,532,000, Nov. 29, 2010 – Nov. 28, 2013 (16.7% responsibility).
29. "Radar Imaging via Exploitation of Structured Sparsity," *National Science Foundation I/UCRC*, $44,000, Oct. 1, 2010 – Sep. 30, 2011 (100% responsibility).
30. "Soft Inference Under Structured Sparsity," *National Science Foundation: CIF Small*, $423,032, Oct. 1, 2010 – Sep. 30, 2015 (100% responsibility).
31. "Simultaneous Transmit and Receive Research," *MIT Lincoln Labs*, $99,990, Oct. 1, 2009 – Dec. 31, 2010 (100% responsibility).
32. "AFRL Sensors," *Wright Bros. Institute, Inc.*, $1,314,000, Sep. 1, 2007 – Dec. 31, 2009 (13% responsibility).
33. "Efficient Communication over the Underwater Acoustic Channel," *Office of Naval Research*, $300,000, Nov. 1, 2006 – Oct. 31, 2009 (100% responsibility).
34. "Computational Electromagnetics Analysis of Wireless Propagation," *Sandia National Laboratories*, $60,000, May 1, 2006 – Sep. 30, 2006 (with R. Burkholder, 50% responsibility).
35. "EM Threat analysis for Wireless Systems," *Sandia National Laboratories*, $50,000, May 1, 2005 – Sep. 30, 2005 (with I. Gupta and R. Burkholder, 33% responsibility).
36. "Multi-antenna Communication over Doubly-dispersive Channels," *Motorola Labs: University Partnership in Research*, $84,941, Oct. 1, 2004 – Dec. 31, 2007 (100% responsibility).
37. "Signal Processing for Practical Data Communication over the Doubly-Selective Wireless Channel," *National Science Foundation: CAREER*, $458,095, July 1, 2003 – June 30, 2008 (100% responsibility).
38. "Cooperative Wireless Networks," *National Science Foundation: Small ITR*, $400,000, July 1, 2002 – June 30, 2005 (with H. El Gamal, 50% responsibility).
39. "Channel Identification and Data Detection Using Prior Statistical Information," *Ohio State University Seed Grant*, $22,014; Jan 12, 2001 – June 30, 2002 (100% responsibility).

Tutorials

1. "Statistical Physics, Phase-transition Analysis, and Message-passing Algorithms: Powerful Tools for High-dimensional Inference," *IEEE International Symposium on Information Theory* (Paris, France), 2019.

Invited Talks

1. Asilomar Conference (Pacific Grove, CA), 10/31/22.
2. Allerton Conf. on Communication, Control, and Computing (Monticello, IL), 9/30/22.
3. International Conference on Acoustics, Speech, and Signal Processing (virtual), 6/8/21.
4. International Conference on Acoustics, Speech, and Signal Processing (virtual), 5/8/20.
5. London Symposium on Information Theory (London), 5/30/19. (Keynote talk)
6. Allerton Conf. on Communication, Control, and Computing (Monticello, IL), 10/4/18.
7. International Conference on Signal Processing and Communications (Bengaluru, India), 7/19/18.

8. Indian Institute of Science (Bengaluru, India), 7/13/18.
9. Purdue University (West Lafayette, IN), 6/21/18.
10. SIAM Conference on Imaging Science (Bologna, Italy), 6/7/18.
11. Workshop on Information Theory and Applications (ITA) (San Diego, CA), 2/12/18.
12. Asilomar Conference (Pacific Grove, CA), 11/1/17.
13. Ohio State University, Machine Learning Seminar (Columbus OH) 9/7/17.
14. Signal Processing with Adaptive Sparse Structured Representations (SPARS) workshop, 6/8/17. (Keynote talk)
15. Rice University (Houston, TX), 4/20/17.
16. Texas A&M University (College Station, TX), 4/19/17.
17. Workshop on Statistical Physics, Learning, Inference and Networks (Les Houches, France) 3/2/2017.
18. Workshop on Information Theory and Applications (ITA) (San Diego, CA), 2/16/17.
19. University of North Carolina (Chapel Hill, NC), 12/1/16.
20. IEEE Information Theory Workshop (ITW) (Cambridge, England), 9/13/16.
21. Duke University (Durham, NC), 9/7/16.
22. Intl. Traveling Workshop on Interactions between Sparse Models and Technology (iTWIST) (Aalborg, Denmark), 8/24/16. (Keynote talk.)
23. Workshop on Information Theory and Applications (ITA) (San Diego, CA), 2/5/16.
24. MATHEON Workshop on Compressed Sensing and its Applications (Berlin, Germany), 12/11/15.
25. Workshop on Sensing and Analysis of High-Dimensional Data (SAHD) (Durham, NC), 7/27/15.
26. Intl. Biomedical and Astronomical Signal Processing (BASP) Frontiers Workshop Workshop (Villars-sur-Ollon, Switzerland), 1/28/15.
27. Heriot-Watt University (Edinburgh, Scotland), 6/11/14.
28. Chalmers University (Gotenburg, Sweden), 6/8/14.
29. Duke University (Durham, NC), 4/10/14.
30. AMS Central Spring Sectional Meeting, Special Sesson on "Phase Retrieval in Theory and Practice," (East Lansing, MI), 3/14/15.
31. Workshop on Information Theory and Applications (ITA) (San Diego, CA), 2/6/15.
32. Intl. Biomedical and Astronomical Signal Processing Workshop (BASP) (Villars-sur-Ollon, Switzerland), 1/29/15.
33. Conference on Information Science and Systems (Princeton, NJ), 3/19/14.
34. International Zurich Seminar on Communications (Zurich, Switzerland), 2/28/14.
35. Trellisware (San Diego, CA), 2/12/14.
36. Workshop on Information Theory and Applications (ITA) (San Diego, CA), 2/10/14.
37. Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP) (Saint Martin Island) 12/16/13.
38. Ohio State University, Artificial Intelligence Lab (Columbus OH), 11/8/13.
39. University of Michigan (Ann Arbor, MI), 10/10/13.
40. Lincoln Labs (Lexington, MA), 8/14/13.
41. Air Force Research Laboratory (Dayton, OH), 8/13/13.
42. Workshop on Phaseless Reconstruction at the February Fourier Talks (College Park, MD), 3/23/13.
43. Workshop on Information Theory and Applications (ITA) (San Diego, CA), 2/12/13.
44. Intl. Biomedical and Astronomical Signal Processing Workshop (BASP) (Villars-sur-Ollon, Switzerland), 1/30/13.

45. Asilomar Conference (Pacific Grove, CA), 11/5/12.
46. Lincoln Labs (Lexington, MA), 6/27/12.
47. Conference on Information Science and Systems (Princeton, NJ), 3/22/12.
48. Workshop on Information Theory and Applications (ITA) (San Diego, CA), 2/10/12.
49. Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP) (San Juan, Puerto Rico) 12/15/11.
50. Allerton Conf. on Communication, Control, and Computing (Monticello, IL), 9/28/11.
51. Workshop on Information Theory and Applications (ITA) (La Jolla, CA), 2/7/11.
52. Stanford University (Stanford, CA), 12/16/10.
53. Asilomar Conference (Pacific Grove, CA), 11/08/10.
54. University of Illinois (Urbana, IL), 09/20/10.
55. Syracuse University (Syracuse, NY) 03/24/10.
56. IEEE Signal Processing Society Chapter Meeting (Rome, NY), 03/23/10.
57. L'Ecole Supérieure d'Électricité (Supélec) (Paris, France), 07/08/09.
58. Telecommunications Research Center Vienna (FTW) / Vienna University of Technology (TUW) (Vienna, Austria), 06/05/09.
59. Woods Hole Oceanographic Institution (Woods Hole, MA), 6/2/2009.
60. IEEE Communications Theory Workshop (Napa, CA), 5/12/2009.
61. Norwegian University of Science and Technology (NTNU) (Trondheim, Norway), 04/22/09.
62. Norwegian University of Science and Technology (NTNU) (Trondheim, Norway), 04/21/09.
63. Norwegian University of Science and Technology (NTNU) (Trondheim, Norway), 04/20/09.
64. Univ. Marne la Vallée (Paris, France), 04/08/09.
65. L'Ecole Supérieure d'Électricité (Supélec) (Paris, France), 03/25/09.
66. Workshop on Information Theory and Applications (ITA) (La Jolla, CA), 2/12/2009.
67. Eurecom (Sophia Antipolis, France), 11/27/2008.
68. Eurecom (Sophia Antipolis, France), 11/6/2008.
69. Eurecom (Sophia Antipolis, France), 10/22/2008.
70. Nile University (Cairo, Egypt), 7/10/2008.
71. Nile University (Cairo, Egypt), 7/9/2008.
72. Nile University (Cairo, Egypt), 7/8/2008.
73. Woods Hold Oceanographic Institution (Woods Hole, MA), 6/2/2008.
74. Information Theory and Applications Workshop (La Jolla, CA), 1/31/2008.
75. Office of Naval Research (Washington, DC), 5/30/07.
76. Asilomar Conference (Pacific Grove, CA), 11/30/06.
77. Ecole Nationale Supérieure de l'Electronique et des Applications (Paris, France), 6/27/06.
78. Technical University of Delft (Delft, The Netherlands), 6/20/06.
79. Motorola Research (Schaumburg, IL), 3/4/05.
80. University of Texas (Austin, TX), 2/24/05.
81. University of Pittsburgh (Pittsburgh PA), 10/18/04.
82. Lucent Technologies (Holmdel NJ), 3/16/04.
83. University of Washington (Seattle WA), 3/5/04.
84. Dotcast Inc. (Seattle WA), 3/4/04.
85. University of Texas (Austin TX), 1/23/04.
86. Rice University (Houston TX), 1/22/04.
87. Motorola Research (Schaumburg, IL), 12/9/03
88. Ecole Nationale Supérieure des Télécommunications (Paris, France), 6/25/03
89. Ecole Nationale Supérieure de l'Electronique et des Applications (Paris, France), 6/24/03

90. Institute National des Telécommunications, (Evry, France), 6/23/03
91. Cornell Univ. (Ithaca, NY), 5/30/03
92. Pennsylvania State Univ. (State College, PA), 4/10/03
93. Univ. of Wisconsin (Madison, WI), 3/26/03
94. Worcester Polytechnical Institute (Worcester, MA), 11/21/02
95. ATI Inc. (Langhorne, PA), 10/11/02
96. NxtWave Communications (Langhorne, PA), 10/19/01
97. Thomson Multimedia Research (Princeton, NJ), 10/19/01
98. Phonak Inc (Champaign, IL), 10/05/01
99. Illinois Institute of Technology (Chicago, IL), 3/30/01
100. Allerton Conference (Monticello, IL), 10/05/00
101. Princeton University (Princeton, NJ), 11/12/99
102. Lucent Technologies (Crawford Hill, NJ), 11/5/99
103. Applied Signal Technology (Sunnyvale, CA), 10/30/98
104. Tektronix Inc. (Beaverton, OR), 5/18/98
105. Applied Signal Technology (Sunnyvale, CA), 4/28/98

Professional Activities

- Associate Editor, SIAM Journal on Imaging Science, 2020–present.
- Elected Member, Asilomar Steering Committee, 2018–present.
- Area Chair: International Biomedical and Astronomical Signal Processing (BASP) Frontiers Workshop, 2017–present.
- Elected Member, IEEE Signal Processing Society Computational Imaging (CI) Technical Committee, 2018–2023.
- Elected Member, IEEE Signal Processing Society Sensor Array and Multichannel (SAM) Technical Committee, 2013–2018.
- Elected Member, IEEE Signal Processing Society Signal Processing for Communications and Networking (SPCOM) Technical Committee, 2005–2010.
- Guest Editor, IEEE Journal on Selected Areas in Communications, Special Issue on "In-band Full-duplex Wireless: Challenges and Opportunities," 2013-2014.
- Associate Editor, IEEE Signal Processing Letters, 2005–2009.
- Chair, IEEE Signal Processing Society Chapter: Columbus OH, 2005–2019.
- General Chair: Asilomar Conference on Signals Systems and Computers, 2016.
- Technical Chair: Asilomar Conference on Signals Systems and Computers, 2013.
- Technical Co-Chair, ACM International Workshop on UnderWater Networks (WUWNet), 2008.
- Technical Co-Chair, IEEE Communication Theory Workshop, 2006.
- Vice Technical Chair: Asilomar Conference on Signals Systems and Computers, 2012.
- Technical Area Chair: Signal Processing and Adaptive Sytems, Asilomar Conference on Signals Systems and Computers, 2011.
- Organizer, Special Session, IEEE Information Theory Workshop (ITW), 2016.
- Organizer, Special Session, IEEE Computational Advances in Multi-Channel Sensor Array Processing (CAMSAP), 2015.
- Organizer, 2 Special Sessions, Asilomar Conference on Signals Systems and Computers, 2015.
- Organizer, Special Session, IEEE Computational Advances in Multi-Channel Sensor Array Processing (CAMSAP), 2013.
- Organizer, Special Session, IEEE Underwater Acoustic Signal Processing Workshop, 2009.
- Member, Technical Program Committee:

- AAAI Conference on Artificial Intelligence, 2024.
- IEEE Conference on Acoustics, Speech, and Signal Processing: 2005–2019.
- IEEE Sensor Array and Multichannel Signal Processing Workshop, 2013–2019.
- IEEE Global Communications Conference: 2004, 2008–2010, 2014.
- IEEE Global Conference on Signal and Information Processing: 2013.
- IEEE Statistical Signal Processing Workshop, 2007, 2012.
- IEEE Workshop on Signal Processing Advances in Wireless Communications, 2005–2011.
- Adaptive Sensor Array Processing Workshop (MIT Lincoln Lab), 2007.
- IEEE Vehicular Technology Conference, 2005.

Professional Memberships

- IEEE Signal Processing Society
- IEEE Information Theory Society

Postdocs Advised

1. Subhojit Som, 2011, *Compressive Imaging via Turbo Approximate Message Passing*. Now with Microsoft.

Students Graduated

1. Edward Reehorst (Ph.D. Dec. 2022), *Machine Learning for Image Inverse Problems and Novelty Detection*. Now with AFRL.
2. Michael Wharton (M.S. May 2021), *Deep Learning For RADAR Signal Processing*. Now with AFRL.
3. Subrata Sarkar (Ph.D. Aug. 2020), *Solving Linear and Bilinear Inverse Problems using Approximate Message Passing Methods*. Now with Amazon.
4. Ali Foroughipour (Ph.D. May 2019, co-supervised with Lori Dalton), *Optimal Bayesian Feature Selection: A New Approach for Biomarker Discovery*. Now with The Jackson Laboratory.
5. Evan Byrne (Ph.D. Apr. 2019), *Inference in Generalized Linear Models with Applications*. Now with Root Insurance.
6. Evan Byrne (M.S. Aug. 2015), *Sparse Multinomial Logistic Regression via Approximate Message Passing*.
7. Jeremy Vila (Ph.D. May 2015), *Empirical-Bayes Approaches to Recovery of Structured Sparse Signals via Approximate Message Passing*. Now with Shell Oil.
8. Justin Ziniel (Ph.D. Dec. 2014), *Message Passing Approaches to Compressive Inference Under Structured Signal Priors*. Now with IBM.
9. Jason Parker (Ph.D. Aug. 2014), *Approximate Message Passing Algorithms for Generalized Bilinear Inference*. Now with the Air Force Research Laboratory.
10. Dong Meng (M.S. June 2012), *Approximate Message Passing for Multi-Carrier Transmission over Doubly Selective Channels*. Now with NVIDIA.
11. Rohit Aggarwal (Ph.D. May 2012, co-supervised with C. Emre Koksal), *Resource Allocation and Design Issues in Wireless Systems*. Now with Bidgely, Inc.
12. Sugumar Murugesan (Ph.D. July 2010, co-supervised with Ness Shroff), *Opportunistic Scheduling Using Channel Memory in Markov-Modeled Wireless Networks*. Now with Johnson Controls, Inc.
13. Sungjun Hwang (Ph.D. Jan. 2010), *Communication over Doubly Selective Channels: Efficient Equalization and Max-Diversity Precoding*. Now with Qualcomm, Inc.
14. Brian Carroll (M.S. June 2009), *Analysis of Sparse Channel Estimation*. Now with the National Security Agency.
15. Sibasish Das (Ph.D. Jan. 2008), *Analysis and Design of Pilot-Aided Multicarrier Systems over Doubly Selective Channels with a Local Subcarrier Processing Constraint*. Now with Qualcomm, Inc.
16. Hong "Iris" Liu (Ph.D. July 2007), *Frequency-Domain Equalization of Single-Carrier*

Communications over Doubly Selective Channels. Now with Broadcom, Inc.

17. Arun P. Kannu (Ph.D. Mar. 2007), *Communications Over Noncoherent Doubly Selective Channels*. Now with IIT Madras. *Outage-Limited Cooperative Channels: Protocols and Analysis*. Now with Qualcomm, Inc.
18. Sugumar Murugesan (M.S. July 2006), *Training and Scheduling in the Non-Coherent MIMO Uplink*. Now with ASSIA, Inc.
19. Adam R. Margetts (Ph.D. Aug. 2005), *Joint Scale-Lag Diversity in Mobile Wideband Communications*. Now with MIT Lincoln Laboratories.
20. Sibasish Das (M.S. Nov. 2004), *Turbo-Equalization of Pulse-Shaped Multi-carrier Modulation in Doubly Selective Channels*. Now with Qualcomm, Inc.
21. Arun P. Kannu (M.S. May 2004), *Tracking of Doubly-Dispersive Channels*. Now with IIT Madras.
22. Siddharth H. D'Silva (M.S. Nov. 2002), *On OFDM in Doubly-Dispersive Channels*. Now with Autoliv Electronics.
23. Adam R. Margetts (M.S. Nov. 2002), *Adaptive Chip-Rate Equalization of Downlink Multirate Wideband CDMA*. Now with MIT Lincoln Laboratories.
24. Wei Hu (M.S. Aug. 2002), *Blind Equalization and Identification for Differential Space-Time Modulated Communication Systems*.
25. Bijoy Bhukania (M.S. Aug. 2002), *Detection of Differential Unitary Space-Time Modulation in Fast Rayleigh-Fading Channels*. Now with Broadcom, Inc.
26. José Albornoz (M.S. Aug. 2001, co-supervised with Mike P. Fitz), *A Wideband Channel Sounder*. Now with Fujitsu, Inc.

Current Students

1. Xuan Lei (Ph.D. expected May 2026, co-advised with Prof. Rizwan Ahmad).
2. Jeffrey Wen (Ph.D. expected May 2025, co-advised with Prof. Rizwan Ahmad).
3. Matt Bendel (Ph.D. expected May 2025, co-advised with Prof. Rizwan Ahmad).
4. Chris Ebersole (Ph.D. expected May 2025).
5. Saurav K Shastri (Ph.D. expected Aug 2024).
6. Srijith Nair (M.S. expected May 2024).

Courses Developed

1. Introduction to Machine Learning: OSU-ECE 4300/5300/5307 (Spring 2019).
2. Statistical Signal Processing: OSU-ECE 6202 (Spring 2015).
3. Advanced Digital Signal Processing: OSU-ECE 6200 (Autumn 2013).
4. Digital Signal Processing I: OSU-ECE 600 (Autumn 2009), 5200 (Autumn 2012).
5. Analog and Digital Communications: OSU-ECE 501 (Autumn 2007).
6. Adaptive Filtering: OSU-ECE 801.01 (Autumn 2001).
7. Digital Signal Processing II: OSU-ECE 700 (Winter 2001).
8. Source Coding and Audio Compression: Cornell-EE 597 (Autumn 1999).

Courses Taught

1. Introduction to Machine Learning: OSU-ECE 4300/5300/5307 (Sp19, Sp20, Au20, Sp21, Au21, Sp22, Au22, Sp23, Au23, Sp24)
2. Digital Signal Processing I: OSU-ECE 600 (Au09, Wi10, Au10, Wi11, Au11), OSU-ECE 5200 (Au12, Sp14, Au14, Au15, Au17, Au18, Au19)
3. Advanced Digital Signal Processing: OSU-ECE 6200 (Au13, Sp16, Sp18)
4. Statistical Signal Processing: OSU-ECE 6202 (Sp15)
5. Digital Communications I: OSU-ECE 702 (Sp06, Sp07, Sp08, Sp10, Sp11, Sp12)
6. Analog and Digital Communications: OSU-ECE 501 (Au07, Wi08, Wi12)
7. Digital Signal Processing II: OSU-ECE 700 (Wi01, Wi02, Wi03, Wi04, Wi05, Wi06, Wi07)
8. Analysis and Design in Circuits and Electronics: OSU-ECE 301 (Au02, Au04, Au06)
9. Source Coding: Cornell-EE 597 (Au99), OSU-ECE 693 (Sp06)

10. Adaptive Filtering: OSU-ECE 801.01 (Au01, Au03, Au05)
11. Digital Communications II: OSU-ECE 809 (Sp05)
12. Detection and Estimation Theory: OSU-ECE 806 (Sp01, Sp02, Sp03, Sp04)
13. Probability and Random Variables: OSU-ECE 804 (Au00)

Departmental Service

1. Area Chair (Control, Signal Processing, Computer Vision Area), 2012-2015, 2017-2019, 2022-present.
2. Awards Committee: 2023-present (Chair).
3. Curriculum Committee: 2006–2007, 2012–2015, 2017–2019, 2022-present.
4. Computer Engineering Redesign Taskforce: 2023-present.
5. School of Computing Taskforce: 2023-present.
6. Promotion and Tenure Committee: 2014–2016, 2017–2019, 2019-2022 (Chair).
7. Hybrid Teaching Taskforce (Chair): 2020.
8. Computer Engineering Hiring Committee: 2020.
9. Advisory Committee: 2007–2008, 2015–2016.
10. Personnel Committee: 2011–2012.
11. Admissions Committee: 2010–2011.
12. Graduate Studies Committee: 2009–2011.
13. ECE Undergraduate Studies Committee: 2002–2003, 2007–2008, 2009–2010.
14. Computer Facilities Committee: 2001–2003, 2005–2008 (Chair).
15. Performance Plan Subcommittee for Undergraduate Program: 2008.
16. Faculty Secretary: 2007–2008.
17. Graduate Recruiting and Financial Aid Committee: 2003–2005.
18. ECE Strategic Planning Committee: 2001–2002.

College and University Service

1. College of Engineering Awards Committee: 2023-2024.
2. Search Committee for ECE Chair: 2003-2006, 2012-2013.
3. Implementation Committee for the Engineering Education Innovation Center: 2006-2007.
4. Subcommittee for Innovation in Undergraduate Engineering Education: 2005-2006.
5. 2003-2004 Faculty advisor to the *OSU Women's Ultimate Frisbee* team.
6. 2000-2001 Faculty advisor to the *OSU Men's Ultimate Frisbee* team.

Personal

Born 22 July 1970 in Evanston IL. US & Swiss Citizenships.