

Curriculum Vitae

Personal Information

Paul M. Goggans
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Education

- B.S. Electrical Engineering, Auburn University, May 1977, With High Honor
- M.S. Electrical Engineering, Auburn University, December 1978, Thesis: Statistical Analysis of Backgrounds for the Development of Infrared Warning Receivers, Advisor: Dr. L. J. Pinson
- Ph.D. Electrical Engineering, Auburn University, March 1990, Dissertation: A Combined Method of Moments and Approximate Boundary Condition Solution for Scattering from a Conducting Body with a Dielectric Filled Cavity, Advisor: Dr. T. H. Shumpert

Professional Experience

- Staff Member Sandia National Laboratories, Radar Signal Analysis Division, January 1979 to August 1985.
- Adjunct Professor University of New Mexico, September 1984 to May 1985.
- Instructor Auburn University, September 1985 to February 1990.
- Assistant Professor University of Mississippi, February 1990 to July 1994
- Consultant U.S. Army Research Office under a Scientific Services Contract, July 1990 to December 1995.
- Associate Professor University of Mississippi, August 1994 to July 2012
- Visiting Professor Boise State University, August 2001 to May 2002
- Professor University of Mississippi, August 2012 to Present

Publications

- Papers
- C-Y Chan and P.M. Goggans, "Using Bayesian inference for the design of FIR filters with signed power-of-two coefficients," *Signal Processing*, vol. 92, no. 12, pp. 2866 – 2873, 2012.
- X. Wu, L. Cao, and P.M. Goggans, "Optimization for image transmission over varying channel with MCMC," *EURASIP Journal on Wireless Communications and Networking*, vol. 2012, no. 1, pp. 275, 2012.

D.E. Waddell, P. M. Goggans, and G.J. Snyder, “Novel tactile feedback to reduce overt stuttering,” *Neuroreport*, vol. 23, no. 12, pp. 727–730, August 2012.

P. M. Goggans and C-Y Chan, “Using the Markov chain Monte Carlo method to estimate model order,” *The Journal of the Acoustical Society of America*, vol. 130, no. 4, pp. 2328–2328, 2011, Invited paper.

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N. Xiang, P. M. Goggans, T. Jasa, and P. Robinson, “Bayesian characterization of multiple-slope sound energy decays in coupled-volume systems,” *The Journal of the Acoustical Society of America*, vol. 129, no. 2, pp. 741–752, 2011.

P. M. Goggans and C-Y Chan, “Using Bayesian inference for acoustic array design,” *The Journal of the Acoustical Society of America*, vol. 127, no. 3, pp. 1960–1960, 2010, Invited paper.

C-Y Chan and P. M. Goggans, “Using Bayesian inference for linear phase log FIR filter design,” in *Bayesian Inference and Maximum Entropy Methods: The 29th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering*, Paul M. Goggans and Chun-Yong Chan, Eds. 2009, vol. 1193, pp. 329–335, AIP.

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P. M. Goggans and C-Y Chan, “Assigning priors for ordered and bounded parameters,” in *Bayesian Inference and Maximum Entropy Methods: Proceedings of the 27th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering*, Kevin H. Knuth, Ariel Caticha, Julian L. Center, Adom Giffin, and Carlos C. Rodriguez, Eds. 2007, vol. 954, pp. 276–282, AIP.

R. W. Scharstein and P. M. Goggans, “Conductance between two strip electrodes on a conducting ground with a nearby tunnel,” *Electromagnetics*, vol. 27, no. 4, pp. 183–194, May 2007.

P. M. Goggans and Y. Chi, “Electromagnetic induction landmine detection using Bayesian model comparison,” in *Bayesian Inference and Maximum Entropy Methods: Proceedings of the 26th International Workshop*

on Bayesian Inference and Maximum Entropy Methods in Science and Engineering, Ali Mohammad-Djafari, Ed. 2006, vol. 872, pp. 533–540, AIP.

N. Xiang, P. M. Goggans, T. Jasa, and M. Kleiner, “Evaluation of decay times in coupled spaces: Reliability analysis of Bayesian decay time estimation,” *Journal of the Acoustical Society of America*, vol. 117, pp. 3705–3715, June 2005.

P. M. Goggans, M. Kleiner, and N. Xiang, “Bayesian probabilistic analysis of sound energy decay characteristics in acoustically coupled rooms,” in *Audio Engineering Society Convention 118*, 5 2005.

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P. M. Goggans and Y. Chi, “Using thermodynamic integration to calculate the posterior probability in Bayesian model selection problems,” in *Bayesian Inference and Maximum Entropy Methods in Science and Engineering: 23rd International Workshop*, Gary J Erickson and Yuxiang Zhai, Eds. 2004, vol. 707, pp. 59–66, AIP.

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N. Xiang and P. M. Goggans, “Bayesian decay time analysis in coupled spaces using a proper decay model,” *The Journal of the Acoustical Society of America*, vol. 111, pp. 2332, 2002.

N. Xiang, P. M. Goggans, and D. Li, “Measurement of decay times in coupled spaces,” *The Journal of the Acoustical Society of America*, vol. 109, pp. 2283, 2001.

N. Xiang and P. M. Goggans, “Evaluation of decay times in coupled spaces: Bayesian parameter estimation,” *Journal of the Acoustical Society of America*, vol. 110, pp. 1415–1424, September 2001.

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J. D. Pursel and P. M. Goggans, "A student programming project: Part I - Computation of the steady state radar cross section of realistic targets," in *Proceedings of the 1995 IEEE Antennas and Propagation Society International Symposium*, June 1995, vol. 2, pp. 1091–1094.

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P. M. Goggans and A. W. Glisson, "A surface integral equation formulation for low contrast scatterers based on radiation currents," *Journal of Applied Computational Electromagnetics*, vol. 10, no. 1, March 1995.

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A. A. Kishk and P. M. Goggans, "Electromagnetic scattering from two-dimensional composite objects," *Journal of Applied Computational Electromagnetics*, vol. 9, no. 1, pp. 32–39, March 1994, Won the Best Paper Award for papers published in the Journal of the Applied Computational Electromagnetics Society for the year proceeding the 1995 ACES conference.

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A. A. Kishk, A. W. Glisson, and P. M. Goggans, “Scattering from conductors coated with materials of arbitrary thickness,” *IEEE Trans. Antennas Propagat.*, vol. 40, no. 1, pp. 108–112, January 1992.

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ity,” *IEEE Trans. Antennas Propagat.*, vol. 39, no. 7, pp. 960–967, July 1991.

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T. H. Shumpert, P. M. Goggans, and M. A. Honnell, "Technology trends in bistatic radar," Report for Contract Number DAAH0184CA191 with US Army Missile & Space Intelligence Center, Redstone Arsenal, AL, Auburn University, September 1986.

P. M. Goggans, "The probability of failure to fire of the MC1828, MC2807, and MC3280 radar fuzes," Secret Formerly Restricted Data SAND850238, Sandia National Laboratories, February 1985.

P. M. Goggans, "Evaluation of B83 drop restrictions," Secret Formerly Restricted Data SAND840168, Sandia National Laboratories, April 1984.

P. M. Goggans, "Simulation of a binary phased locked loop," Unclassified SAND822362, Sandia National Laboratories, January 1983.

P. M. Goggans, D. A. Jelinek, and W. F. Nielsen, "Securicom: An antijam, secure message, security force radio communication system, technical summary," Unclassified Limited Distribution SAND800347, Sandia National Laboratories, March 1981.

L. J. Pinson and P. M. Goggans, "Infrared target/background discrimination phase I - Background spectral modeling," Report for Contract Number F33615-77-C-1188 with the Air Force Avionics Laboratory, Air Force Systems Command, United States Air Force, Wright-Patterson AFB, Ohio, Auburn University, 1978.

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