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April 11, 2012

**CURRENT
POSITIONS**

Director of the Graduate Program in Telecommunications, Department of Electrical and Computer Engineering, George Mason University, since 2008.

Associate Professor, Department of Electrical and Computer Engineering, George Mason University, since 1991.

**PRIOR
EXPERIENCE**

SIEMENS AG in Munich, Germany: Systems Engineering for Base Stations for next generation mobile communication networks, 1990–1991.

ECUTEL, Inc., Alexandria, VA: Chief Scientist responsible for design and development of Mobile VPN product, 1999–2000 (during sabbatical).

EDUCATION

Ph.D. in Electrical & Computer Engineering, Rice University, Houston, Texas, July 1990, with a thesis entitled, “*On the Capacity of Infinite Population Random Multiple Access Collision Channels.*” Advisor: B. Aazhang.

‘Diplom-Ingenieur’ with highest honors in Electrical Engineering, Ruhr-Universität Bochum, Bochum, Germany, June 1986.

**AWARDS,
HONORS,
AND
MEMBER-
SHIPS**

Outstanding Teaching Award, School of IT&E, George Mason University, 2001.

Fulbright Travel Grant, 1986–87.

Graduate Fellowship in Electrical Engineering, Rice University, 1986–87.

‘Preis der Ruhr-Universität Bochum’ for the best thesis in Electrical Engineering, 1986.

‘Preis des VDE-Bezirksvereins Rhein-Ruhr’ for outstanding graduates in Electrical Engineering, 1986.

Eta Kappa Nu Honor Society, 1987.

**RESEARCH
INTERESTS**

Communication Systems; with emphasis on wireless communications.

Statistical Signal Processing; including detection in non-Gaussian noise.

Communication Networks; including, measuring the Internet, multiple-access protocols, and mobility management in wireless communication networks.

ECE 732: Mobile Communication Systems
ECE 630: Statistical Communication Theory
ECE 460: Communication and Information Theory
ECE 542: Computer Network Architectures and Protocols
ECE 528: Random Processes in Electrical and Computer Engineering
ECE 463: Digital Communication Systems
ECE 499: Selected Topics in Digital Communications
ECE 101: Introduction to Electrical Engineering I
ECE 201: Introduction to Electrical Engineering II

RESEARCH PROJECTS

DARPA (XG Program), “Modeling and Analysis of AV-OFDM Waveform,” member of Raytheon-led team, 2001-2004.

DARPA, “Real-Time End-to-End Characterization of Network Connections with Applications to Flow Control and Traffic Management,” 1998.

Office for Research and Development, “Modulation Classification in Unknown Dispersive Environments,” with G. Orsak, 1996.

GMU-Graduate Research Assistant: “Computationally Efficient Methods for Self-Adaptive Maximum-Likelihood,” 1995.

NSF(Research Initiation Award) “Self-Adaptive Maximum-Likelihood Sequence Estimation,” 1993.

Rome Laboratories (through GMU’s C3I Center), “Adaptive Channel Assignment for Cellular Wireless Communication Networks through Handovers.” 1993.

PROFES- SIONAL SERVICES

Organizer of NSF sponsored workshop on *Research Directions in Wireless Communications*, Arlington, VA 2002.

Member of ETSI technical subcommittee GSM 3 for the specification of the pan-European mobile communication network GSM, 1990–91.

Member of the Organizing Committee, *1992 International Symposium on World-wide Advances in Communication Networks*.

Assistant Registration Chairman, *1993 Information Theory Symposium*.

Registration Chairman, *1994 Information Theory Workshop*.

Technical Reviewer: *IEEE Trans. on Communications*
IEEE Trans. on Information Theory
IEEE Trans. on Selected Areas in Communications
IEEE Trans. on Signal Processing
IEEE Trans. on Circuits and Systems, Part I
The National Science Foundation

CONSULTING Federal Communication Commission, Washington, DC
 Short Course on Communication System Modeling and Simulation, Summer 2007.
 Nextjet, Inc., Dallas, TX
 Research and development for wireless data communication and acquisition device, 2000-2001
 TASC, Reston, VA
 Short course on Data Communication Networks, Summer 1992.
 HTI, Clifton, VA
 Design of CDMA multi-user receivers, April 1993 through December 1994.
 LC Technologies, Fairfax, VA
 Image Processing Algorithms for Eye-Tracking Applications, 1994-1997.
 Ecutel, Inc., Alexandria, VA
 Research and development for commercial mobile VPN software, 1997-1999.

PUBLICATIONS

Journal Articles S. Xing, B.-P. Paris, "Measuring the Size of the Internet via Importance Sampling," *IEEE Journal on Selected Areas in Communications*, August 2003.
 B.-P. Paris, "Finite-Precision Decorrelating Receivers for Multi-User CDMA Communication Systems," *IEEE Transactions on Communications*, April 1996.
 G.C. Orsak, B.-P. Paris, "On the Relationship between Measures of Discrimination and the Performance of Suboptimal Detectors," *IEEE Transactions on Information Theory*, January 1995.
 B.-P. Paris, B. Aazhang, "Near-Optimum Control of Multiple Access Channels," *IEEE Transactions on Communications*, August 1992.
 B. Aazhang, B.-P. Paris, G.C. Orsak, "Neural Net Receivers in Spread-Spectrum Multiple-Access Communications," *IEEE Transactions on Communications*, July 1992.

Contributions to Books S. Xing, B.-P. Paris, X. Meng, "Sampling Approaches for Collecting Internet Statistics in the Digital Economy," *Handbook of Research on Global Information Technology Management*, IGI Global, M. Raisinghani (Ed.), 2008.
 B.-P. Paris, "Convolution," invited book chapter in *Wiley Encyclopedia of Electrical and Electronics Engineering*, Vol. 4, Wiley Interscience, J.G. Webster (Ed.), 1999.
 B.-P. Paris, "Access Methods," invited book chapter in *The Mobile Communications Handbook* and *The Communications Handbook*, CRC Press, J. Gibson (Ed.), 1995 and 1996, respectively. The second edition of the *The Mobile Communications Handbook* was published in 1999.
 B.-P. Paris, G. Orsak, M.K. Varanasi, B. Aazhang, "Neural Net Receivers in Spread-Spectrum Multiple-Access Communication Systems," in *Advances in Neural Information Processing Systems I*, pp. 272–280, David S. Touretzky, Ed., San Mateo,

CA: Morgan Kaufmann Publishers, 1989.

*Conference
Papers*

S. Wood, B.-P. Paris, "Channel Order Estimation via Sample Sorting," *45th Annual Conference on Information Sciences and Systems*, Baltimore, MD, March 2011.

S. Pandula and B.-P. Paris, "Distributed Multi-cell Power Control in Transmit Beamforming Systems using Intercell-Interference plus Noise Estimates," *45th Annual Conference on Information Sciences and Systems*, Baltimore, MD, March 2011.

J. Gible and B.-P. Paris, "Suffix Trees for Universal Source Modeling with Applications," *45th Annual Conference on Information Sciences and Systems*, Baltimore, MD, March 2011.

S. Pandula and B.-P. Paris, "Precoder design via Approximate Joint Diagonalization for Ricean Correlated MIMO Channels in STBC Systems," *Proceedings of the 2008 Conference on Information Sciences and Systems*, Princeton, NJ, March 2008.

S. Pandula and B.-P. Paris, "Capacity Optimization for Ricean Correlated MIMO Channels with Decorrelator Receiver," *Proceedings of the 2008 Conference on Information Sciences and Systems*, Princeton, NJ, March 2008.

S. Pandula and B.-P. Paris, "Performance Analysis of MIMO Receivers under Imperfect CSIT," *Proceedings of the 2007 Conference on Information Sciences and Systems*, Baltimore, MD, March 2007.

S. Wood, B.-P. Paris, and J. Nelson, "Blind Equalization via Sample Sorting," *2006 DSP Workshop*, October 2006.

S. Xing, B.-P. Paris, and X. Meng, "Collecting Internet Statistics," *Proceedings of the 2005 International Conference on Modeling, Simulation and Visualization Methods*, June 2005.

S. Xing and B.-P. Paris, "On Exponential Growth of the Web," *Proceedings of the 2004 International Conference on Internet Computing*, June 2004.

S. Xing and B.-P. Paris, "Mapping the Growth of the Internet," *Proceeding of the 2003 IEEE International Conference on Computer Communications and Networks*, October 2003.

S. Xing and B.-P. Paris, "Measuring the size of the Internet via importance sampling - biasing through thresholding," *Proceedings of the 36th Annual Conference on Information Sciences and Systems*, Princeton, NJ, March 2002.

S. Xing and B.-P. Paris, "Importance sampling for Measuring the Size of the Internet," *Proceedings of the 35th Annual Conference on Information Sciences and Systems*, Baltimore, MD, March 2001.

S. Sud and B.-P. Paris, "Characterizing the performance of a Two-User System through a Dispersive Channel," *MILCOM 2000*, Los Angeles, CA, October 2000.

J. Herman and B.-P. Paris, "A New Approach to the Blind Subspace Separation and Diversity Combining of MIMO-FIR Channels," *Proceedings of the 1999 Conference*

- on Information Sciences and Systems*, Baltimore, MD, March 1999.
- A.R. Shah and B.-P. Paris, "Self-Adaptive Sequence Detection via the M-Algorithm," *1998 MPRG Conference*, Blacksburg, VA, 1998.
- B.-P. Paris and H. Chen, "Nonlinear Blind Channel Equalization via Ring Decision Feedback", *1998 International Symposium on Information Theory*, Cambridge, MA, August 1998.
- H. Chen and B.-P. Paris, "K-Look-Ahead Sliding (KLAS) Window Algorithms for Blind Equalization," *Proceedings of the 1998 Conference on Information Sciences and Systems*, Princeton, NJ, March 1998.
- N. Warke, G. C. Orsak, B.-P. Paris and H. Chen, "Universal Modulation Classification for Unknown Non-Gaussian Dispersive Channels," *Proceedings of the 1997 Conference on Information Sciences and Systems*, Baltimore, MD, March 1997.
- G.C. Orsak and B.-P. Paris, "Modulation Classification in Unknown Dispersive Environments," *ICASSP 97*, Munich, Germany.
- A.R. Shah and B.-P. Paris, "Robust Detectors for Self-Adaptive Sequence Detection," *The International Workshop on Mobile, Communications*, Thessaloniki, Greece, September, 1996.
- W.G. Evans and B.-P. Paris, "Channel Sharing for Cellular Networks," *Proceedings of the 1996 Conference on Information Sciences and Systems*, Princeton, NJ, March 1996.
- A.R. Shah and B.-P. Paris, "Robust Detectors for Distinguishing between Two Signals in Unknown Dispersive (ISI) Channels," *Proceedings of the 1996 Conference on Information Sciences and Systems*, Princeton, NJ, March 1996.
- A.R. Shah and B.-P. Paris, "Tree Search Algorithms for Self-Adaptive Maximum-Likelihood Sequence Estimation," *1995 International Symposium on Information Theory*, Whistler, Canada, September 1995.
- B.-P. Paris and A.R. Shah, "Matched Subspace Detectors for Distinguishing between Two Signals with Extensions to Blind Maximum-Likelihood Sequence Estimation," *Twenty-Ninth Annual Conference on Information Sciences and Systems*, Baltimore, MD, March 1995.
- B.-P. Paris, "Finite Precision Decorrelating Receivers for Multi-User CDMA Communication Systems," *1994 International Symposium on Information Theory*, Trondheim, Norway, June 1994.
- B.-P. Paris, "Self-Adaptive Maximum-Likelihood Sequence Estimation," *1994 International Symposium on Information Theory*, Trondheim, Norway, June 1994.
- B.-P. Paris, "Finite Precision Decorrelating Receivers for Multi-User CDMA Communication Systems," *Proceedings of the 1994 Conference on Information Sciences and Systems*, Princeton, NJ, March 1994.
- B.-P. Paris, "Self-Adaptive Maximum-Likelihood Sequence Estimation," *Communication Theory Mini-Conference in connection with GLOBECOM '93*, Houston, TX, November 1993.

B.-P. Paris, "Asymptotic Properties of Self-Adaptive Maximum-Likelihood Sequence Estimation," *Twenty-Seventh Annual Conference on Information Sciences and Systems*, Baltimore, MD, March 1993.

G.C. Orsak, B.-P. Paris, "On the Relationship between Suboptimal Detectors and Measures of Discrimination," *1993 International Symposium on Information Theory*, San Antonio, TX, January 1993.

B.-P. Paris, "Increased Throughput in Multiple-Access Control Algorithms with Binary Feedback Through Non-Sequential Collision Resolution," *Twenty-Sixth Annual Conference on Information Sciences and Systems*, Princeton, NJ, March 1992.

B.-P. Paris, B. Aazhang, "Near-Optimum Control of Multiple Access Collision Channels," *29th IEEE Conference on Decision and Control*, Honolulu, HI, December 1990.

B.-P. Paris, B. Aazhang, "A Collision Resolution Algorithm Involving Combinations of Sets of Previously Collided Packets," *Twenty-Fourth Annual Conference on Information Sciences and Systems*, Princeton, NJ, March 1990.

B.-P. Paris, G.C. Orsak, M.K. Varanasi, B. Aazhang, "Neural Net Receivers in Spread-Spectrum Multiple-Access Communication Systems," *1988 IEEE Conference on Neural Information Processing—Natural and Synthetic*, Denver, CO, November 1988.