A Message From the Editor-in-Chief: Best Paper Award Recipients

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The IEEE TRANSACTIONS ON SIGNAL PROCESSING values the quality of its articles and is dedicated to publishing results of the highest grade and repute. In an effort to acknowledge the awardees, as well as the dedicated service of our editorial board in maintaining the high standards of the TRANSACTIONS, I am pleased to initiate a new feature in the form of a yearly column whereby award recipients are announced. The focus will be on awards for articles published in the TRANSACTIONS.

I. BEST PAPER AWARDS

Two articles from the TRANSACTIONS have been selected by the IEEE Signal Processing Society to receive the 2002 Best Paper Award. This award honors the author(s) of a paper of exceptional merit dealing with a subject related to the Society's technical scope, irrespective of the author's age. Eligibility for this award is based on a three-year window preceeding the year of election (viz., 2000–2002 for this year), and judging is based on general quality, originality, subject matter, and timeliness. The 2002 awardees are the following:

1) **Michail K. Tsatsanis**, **Ruifeng Zhang**, and **Subrata Banerjee** for the paper entitled "Network-assisted diversity for random access wireless networks," (*IEEE Transactions on Signal Processing*, vol. 48, no. 3, pp. 702–711, March 2000).

   The article uses signal processing tools in the context of medium access control (MAC layer) problems. Usually, collided packets are discarded and retransmitted. The paper proposes ways of utilizing the waveform information in packet retransmissions in order to provide signal diversity and resolve the collisions with dramatic throughput improvements.

2) **Vitor H. Nascimento** and **Ali H. Sayed** for the paper entitled "On the learning mechanism of adaptive filters," (*IEEE Transactions on Signal Processing*, vol. 48, no. 6, pp. 1609–1625, June 2000).

   The article shows, both theoretically and by experimentation, that the learning abilities of adaptive filters are more sophisticated than originally thought. In particular, at faster adaptation rates, the paper shows that the rate at which the filters can learn is more favorable than what is predicted by mean-square theory. The paper also argues that both mean-square behavior and almost-sure convergence behavior are useful in characterizing more fully the performance of an adaptive filter.

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II. YOUNG AUTHOR BEST PAPER AWARDS

Two additional papers from the TRANSACTIONS have been selected to receive the 2002 Young Author Best Paper Award, which honors the author(s) of an especially meritorious paper dealing with a subject related to the Society's technical scope and whose lead author, upon the date of submission of the paper, is less than 30 years of age. The 2002 awardees are the following:

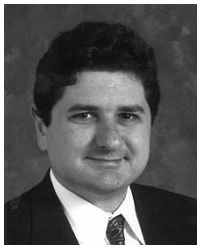
1) **Shawn Kraut**, for the paper co-authored with Louis L. Scharf and L. Todd McWhorter, entitled "Adaptive subspace detectors," (*IEEE Transactions on Signal Processing*, vol. 49, no. 1, pp. 1–16, January 2001).

   This paper characterizes a class of statistics for adaptively detecting multidimensional signals embedded in unknown noise and interference. Generalized likelihood ratio tests are derived under varying assumptions of *a priori* knowledge.

2) **Geert Leus** and **Piet Vandaele**, for the paper co-authored with Marc Moonen, entitled "Deterministic blind modulation-induced source separation for digital wireless communications," (*IEEE Transactions on Signal Processing*, vol. 49, no. 1, pp. 219–227, January 2001).

   This paper presents a deterministic blind source separation algorithm, which is based on code modulation without bandwidth expansion. The approach is robust and applies to both flat and frequency-selective fading.

III. AWARD RECIPIENTS



Michail Tsatsanis received the M.Sc. and Ph.D. degrees in electrical engineering from the University of Virginia, Charlottesville.

He joined Voyan Technology, Santa Clara, CA, in 2000, where he served as Chief Scientist for signal processing and later as Chief Technical Officer. He directed an advanced technology group, which focused on the development of advanced multiline transceiver technologies for copper networks utilizing vectored signal processing architectures. From 1995 to 2000, he was with Stevens Institute of Technology, Hoboken, NJ, were he served as an Associate Professor of electrical engineering. He is the author of more than 80 peer-reviewed papers and two book chapters and holds several patents.

Dr. Tsatsanis has received a number of distinctions including the National Science Foundation CAREER Award and two IEEE Best Paper Awards. He has served the IEEE in various capacities including the position of Associate Editor for the IEEE TRANSACTIONS ON SIGNAL PROCESSING and the IEEE COMMUNICATIONS LETTERS and as Chair of several workshop organizing committees.

Ruifeng Zhang received the B.S. degree from Huazhong University of Science and Technology, Wuhan, China, in 1993, the M.E. degree from Beijing Institute of Technology, Beijing, China, in 1996, and the Ph.D. degree from Stevens Institute of Technology, Hoboken, NJ, in 2000, all in electrical engineering.

He is an assistant professor with the Electrical and Computer Engineering Department, Drexel University, Philadelphia, PA. His research interest is in the general area of statistical signal processing and communications. He is especially interested in signal processing methods for networking.

Subrata Banerjee (M'93) received the B.Tech. (Hons.) degree in computer science and engineering from the Indian Institute of Technology, Delhi, India, in 1988 and the M.S. and Ph.D. degrees in computer science from the University of California, Davis (UC Davis), in 1990 and 1992, respectively.

From 1988 to 1992, he worked at the UC Davis Networks Reserach Laboratory on AFOSR-, NSF-, and ARPA-funded projects on high-speed metropolitan area networks and lightwave networks. From 1993 to 1997, he was a Faculty Member with the University of Miami, Coral Gables, FL, and with the Stevens Institute of Technology, Hoboken, NJ. At Philips Research Labs, Briarcliff Manor, NY, he worked on award-winning in-home wireless networks projects and prototypes. Currently, he is with Andiamo Systems, San jose, CA, working in the area of Storage Area Networks.

Vítor H. Nascimento was born in São Paulo, Brazil. He received the B.Sc. and M.Sc. degrees in electrical engineering from Escola Politécnica, University of São Paulo, in 1989 and 1992, respectively, and the Ph.D. degree from the University of California, Los Angeles, in 1999.

From 1990 to 1994, he was a Lecturer at Escola Politécnica, where he has been an Assistant Professor since 1999. His research interests include adaptive filtering theory and applications, estimation theory, and applied linear algebra.

Ali H. Sayed (F"01) received the Ph.D. degree in electrical engineering in 1992 from Stanford University, Stanford, CA.

He is currently Professor and Vice-Chair of electrical engineering at the University of California, Los Angeles. He is also the Principal Investigator of the UCLA Adaptive Systems Laboratory (www.ee.ucla.edu/asl). He is the author of the textbook *Fundamentals of Adaptive Filtering* (New York: Wiley, 2003), and is the coauthor of the research monograph *Indefinite Quadratic Estimation and Control* (Philadelphia, PA: SIAM, 1999) and of the graduate-level textbook *Linear Estimation* (Englewood Cliffs, NJ: Prentice-Hall, 2000). He is also co-editor of the volume *Fast Reliable Algorithms for Matrices with Structure* (Philadelphia, PA: SIAM, 1999). He is a member of the editorial boards of the *SIAM Journal on Matrix Analysis and Its Applications* and the *International Journal of Adaptive Control and Signal Processing* and has served as coeditor of special issues of the journal *Linear Algebra and Its Applications*. He has contributed several articles to engineering and mathematical encyclopedias and handbooks and has served on the program committees of several international meetings. He has also consulted with industry in the areas of adaptive filtering, adaptive equalization, and echo cancellation. His research interests span several areas, including adaptive and statistical signal processing, filtering and estimation theories, signal processing for communications, interplays between signal processing and control methodologies, system theory, and fast algorithms for large-scale problems.

Dr. Sayed is recipient of the 1996 IEEE Donald G. Fink Award, a 2002 Best Paper Award from the IEEE Signal Processing Society, and co-author of two Best Student Paper awards at international meetings. He is also a member of the technical committees on Signal Processing Theory and Methods (SPTM) and on Signal Processing for Communications (SPCOM), both of the IEEE Signal Processing Society. He is a member of the editorial board of the IEEE SIGNAL PROCESSING MAGAZINE. He has also served twice as Associate Editor of the IEEE TRANSACTIONS ON SIGNAL PROCESSING and is now serving as Editor-in-Chief of the TRANSACTIONS.

Shawn Kraut (M'00) received the B.S. degree in engineering physics in 1993 from the University of Arizona, Tucson, and the Ph.D. degree in physics in 1999 from the University of Colorado, Boulder.

His research area is statistical signal and array processing. His dissertation work analyzed adaptive detection algorithms that are robust with respect to uncertain knowledge of interference. From 1999 to 2002, he was a post-doctoral associate at Duke University, Durham, NC, where he developed algorithms that appropriately utilize both statistical and physical models for applications in radar and sonar. He has also published work on dynamic holography and optical interferometric imaging. He is presently an Assistant Professor at Queen's University, Kingston, ON, Canada.

Geert Leus (M'01) was born in Leuven, Belgium, in 1973. He received the electrical engineering and Ph.D. degrees in applied sciences from the Katholieke Universiteit Leuven (KU Leuven), Leuven, Belgium, in 1996 and 2000, respectively.

Currently, he is a Postdoctoral Fellow of the Fund for Scientific Research–Flanders (FWO–Vlaanderen) at the Electrical Engineering Department, KU Leuven. During the Summer of 1998, he visited Stanford University, Stanford, CA, and from March 2001 to May 2002, he was a Visiting Researcher and Lecturer at the University of Minnesota, Minneapolis. His research interests are in the area of signal processing for communications.

Dr. Leus is a member of the IEEE Signal Processing for Communications Technical Committee and an Associate Editor for the IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS and the IEEE SIGNAL PROCESSING LETTERS.

Piet Vandaele was born in Diksmuide, Belgium, in 1972. He received the electrical engineering and the Ph.D. degrees in applied sciences from the Katholieke Universiteit Leuven, Leuven, Belgium, in 1995 and 1999, respectively.

In 2000, he joined the Research and Innovation Department of Alcatel, Antwerp, Belgium, where he has been working on multicarrier systems for DSL transmission and DSL access and edge network architectures.

Dr. Vandaele received the Alcatel Bell (Belgium) Award (with M. Moonen) in 1997.