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Inside Signal Processing E-Newsletter

April 2009

Highlights

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From the E-Newsletter Team:

Please share the Inside Signal Processing E-Newsletter with your colleagues by emailing and bookmarking <http://enews.ieee-spm.org> for current and archived issues. IEEE members may manage their subscription to email notification of the Inside Signal Processing E-Newsletter at this link.

1. Society News

Nominations Open for 2009 Major SPS Awards

The SPS Awards Board is now accepting nominations for 2009 major SPS awards. Each year, SPS honors outstanding individuals who have made significant contributions related to signal processing through the Society Award, the Technical Achievement Award, the Education Award, and the Meritorious Service Award. The Society also recognizes outstanding publications in SPS journals and magazines through Best Paper Awards, Young Author Best Paper Awards, Signal Processing Magazine Best Paper Award and Best Column Award. The deadline for all awards is **October 1, 2009**.

The award nominations, which are submitted to SPS Vice President-Awards and Membership (Dr. Michael D. Zoltowski at <mikedz@ecn.purdue.edu>), will be vetted by the appropriate technical committees. Prospective nominators are encouraged to prepare nominations well in advance of the deadlines and contact the appropriate technical committees for their vetting procedures. Detailed information and nomination forms of SPS awards can be found online.

Nominating A Deserving Colleague as 2010-2011 Distinguished Lecturer

The IEEE Signal Processing Society (SPS) Awards Board invites nominations for the 2010-2011 SPS Distinguished Lecturers (DLs). Up to five technically diverse and geographically dispersed individuals will be appointed for a two-year term starting from January 2010.

Nominations are solicited by the Awards Board from the Society's Technical Committees, Editorial Boards, Chapters and other boards and committees. Nominees shall be individuals of distinction who are members of the IEEE and of the IEEE Signal Processing Society, who are recognized experts in their fields of endeavor, and who are capable of delivering a message of importance to the technical community as well as to the Society's members organized in chapters around the world.

Nomination form and more information on the DL program can be found online.

2. Conference News

ISCCSP 2010 Going to Cyprus: 3-5 March 2010, Limassol, Cyprus

The 4th International Symposium on Communications, Control and Signal Processing (ISCCSP 2010) will be held in Limassol, Cyprus. It is intended to be a forum for technical exchange amongst scientists having interests in these areas. The technical program will include plenary lectures, regular technical sessions, and special sessions covering the three major tracks.

Cyprus is the third largest island of the Mediterranean. With a rich history traced back over nine thousand years, it has been invaded and claimed over the centuries by a fascinating mixture of civilizations all of which have left their culture and shaped its character. Considered to be the birthplace of Aphrodite, it is a primary tourist destination blessed with natural beauty that ranges from golden beaches and rugged coastlines to rolling hills and forest clad mountains, dotted with picturesque villages.

Prospective authors are invited to submit full-length, four page original papers in PDF to the ISCCSP Technical Program Committee by **9 October 2009**. More information about the conference can be found at this website.

Signal Proc. Conferences: Call for Papers	Location	Date	Tutorial/Special Session	Submission Deadline
IEEE Workshop on Statistical Signal Processing (SSP'09)	Cardiff, UK	Aug. 31 - Sep. 3, 2009		April 27, 2009 (extended)
IEEE International Workshop on Multimedia Signal Processing (MMSP'09)	Rio de Janeiro, Brazil	Oct. 5-7, 2009		May 1, 2009 (extended)
IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA'09)	New Paltz, NY	Oct. 18-21, 2009		May 15, 2009 (extended)
First IEEE International Workshop on Information Forensics and Security (WIFS'09)	London, UK	Dec. 6-9, 2009		May 22, 2009
IEEE International Conference on Signal & Image Processing Applications (ICSIPA'09)	Kuala Lumpur, Malaysia	Nov. 18-19, 2009		June 15, 2009
IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU'09)	Merano, Italy	Dec. 13-17, 2009		July 15, 2009
International Symposium on Communications, Control and Signal Processing (ISCCSP 2010)	Limassol, Cyprus	March 3-5, 2010		October 9, 2009

Upcoming Signal Processing Conferences	Location	Advanced Registration	Conference Dates
27th Picture Coding Symposium (PCS'09)	Chicago, IL		May 6-8, 2009
IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS'09)	Minneapolis, Minnesota		May 17-21, 2009
2nd International Conference on Immersive Telecommunications (IMMERCOM'09)	Berkeley, CA		May 27-29, 2009
10th IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC'09)	Perugia, Italy		June 21-24, 2009
6th IEEE International Symposium on Biomedical Imaging (ISBI'09)	Boston, MA	May 1, 2009	June 28-July 1, 2009
IEEE International Conference on Multimedia and Expo (ICME'09)	Cancún, Mexico	May 3, 2009	June 28-July 3, 2009

16th International Conference on Digital Signal Processing (DSP'09)	Santorini, Greece	May 15, 2009	July 5-7, 2009
6th IEEE International Conference on Advanced Video and Signal based Surveillance (AVSS)	Genova, Italy	June 1, 2009	Sept. 2-4, 2009
IEEE International Workshop on Machine Learning for Signal Processing (MLSP'09)	Grenoble, France	July 5, 2009	Sep. 2-4, 2009
IEEE International Conference on Ultra-Wideband (ICUWB'09)	Vancouver, CA	TBA	Sept. 9-11, 2009
IEEE Workshop on Signal Processing Systems (SiPS'09)	Tampere, Finland	TBA	Oct. 7-9, 2009
IEEE Conference on Sensors (SENSORS'09)	Christchurch, New Zealand	TBA	Oct. 25-28, 2009
IEEE International Conference on Image Processing (ICIP'09)	Cairo, Egypt	TBA	Nov. 7-11, 2009

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3. Publication News

Signal Processing Magazine Deadlines: http://www.ieee-spm.org/?i=cfp

- Special Issue on Convex Optimization for Signal Processing - Whitepaper Due 5 May 2009

- Special Issue on Medical Imaging - Whitepaper Due 1 June 2009

- Special Issue on Video Analytics for Surveillance: Theory and Practice - Whitepaper Due 1 July 2009

- Special Issue on Immersive Communication – Whitepaper Due 1 August 2009

- Columns/Forums rolling submission deadlines

Special Issue Deadlines

Journal of Selected Topics in Signal Processing (website)

- Speech Processing for Natural Interaction with Intelligent Environments - Deadline: 3 July 2009
- Statistical Learning Methods for Speech and Language Processing - Deadline: 7 August 2009

IEEE MultiMedia Magazine (website)

- Mobile and Ubiquitous Multimedia – Deadline: 15 May 2009

Recent Issues of SPS Sponsored and Co-sponsored Publications

Journal Title	Latest Issue	Contents (in PDF)	Xplore Link

IEEE Signal Processing Magazine • Special Issue on Digital Forensics **Special Value**: SPS Members receive a complimentary hard copy of the coordinated concurrent special issue on digital forensics of the IEEE Security & Privacy Magazine	vol. 26, no. 2	PDF	Html
IEEE Transactions on Audio, Speech, and Language Processing	vol. 17, no. 4	PDF	Html
IEEE Transactions on Image Processing	vol. 18, no. 5	PDF	Html
IEEE Transactions on Information Forensics and Security	vol. 4, no. 1	PDF	Html
IEEE Transactions on Signal Processing	vol. 57, no. 5	PDF	Html
IEEE Signal Processing Letters	vol. 16	Recent Articles Html, PDF	Html
IEEE Journal of Selected Topics in Signal Processing • Visual Media Quality Assessment	vol. 3, no. 2	PDF	Html

Journal Title	Latest Issue	Contents (in PDF)	Xplore Link
IEEE Transactions on Medical Imaging	vol. 28, no. 4	PDF	Html
IEEE Transactions on Mobile Computing	vol. 8, no. 5	PDF	Html
IEEE Transactions on Multimedia	vol. 11, no. 3	PDF	Html
IEEE Sensors Journal	vol. 9, no. 5		Html
IEEE Transactions on Wireless Communications	vol. 8, no. 3	PDF	Html
Computing in Science & Engineering Magazine	vol. 11, no. 2	PDF	Html
IEEE MultiMedia	vol. 16, no. 1	PDF	Html

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4. TC News

This month we are pleased to bring to you exclusive reports from three of the IEEE Signal Processing Society's Technical Committees:

• **Sensor Array and Multichannel (SAM) Technical Committee**

The Sensor Array and Multichannel Technical Committee (SAM TC) promotes activities within the technical fields of sensor array processing and multi-channel statistical signal processing. The TC welcomed new leadership and several new members since January 2009, and a number of TC members have received awards and honors in 2008. Learn more from this in-depth report.

• **Signal Processing Theory and Methods (SPTM) Technical Committee**

The Signal Processing Theory and Methods Technical Committee (SPTM TC) promotes activities in the technical areas of theory and methods of digital and statistical signal processing. The TC-sponsored Statistical Signal

Processing Workshop will be held this fall in Cardiff, Wales, UK; and the TC is co-sponsoring a thematic symposium on Network Distributed Signal Processing at ICASSP 2009. Learn more from this in-depth report.

- **Machine Learning for Signal Processing (MLSP) Technical Committee**

  The Machine Learning for Signal Processing Technical Committee (MLSP TC) is at the interface between theory and application, developing novel theoretically-inspired methodologies targeting both longstanding and emergent signal processing applications. The MLSP TC has been actively involved in developing activities in the area of cognitive signal and information processing. Learn more from this in-depth report.

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5. Chapter News and Distinguished Lectures

Do you know? IEEE SPS provides travel support for local chapters to invite **SPS Distinguished Lecturers**. See a list of SPS 2008 and 2009 Distinguished Lecturers, and check each issue of the E-News for upcoming SPS Distinguished Lectures near you.

Chapter	Dates	SPS Distinguished Lectures
Hong Kong	27-April-2009	**Prof. Nikos D. Sidiropoulos** (Technical University of Crete, Greece): "Analyzing Data 'Boxes': Multi-way linear algebra and its applications in signal processing and communications". 4-5pm at Lecture Theatre K of Hong Kong University of Science and Technology. Contact Brian Mak [mak AT cse.ust.hk] for more information.
Japan	April 2009	by **Prof. Walter Kellermann** (University of Erlangen-Nuremberg, Germany). Contact Akihiko Ken Sugiyama [aks@ak.jp.nec.com] for more information.
Princeton/ Central Jersey	12-May-2009	**Dr. Amy Reibman** (AT&T Labs-Research): "Monitoring Video Quality Inside a Network". See the announcement for event details.
Santa Clara Valley	22-June-2009	**Prof. Sergios Theodoridis** (University of Athens, Greece): "Adaptive Learning in a World of Projections". See chapter web site for details.
Santa Clara Valley	21-September-2009	by **Dr. Amy Reibman** (AT&T Labs-Research). Details to be announced. See chapter web site for updates.
Santa Clara Valley	12-October-2009	by **Prof. Lang Tong** (Cornell University). Details to be announced. See chapter web site for updates.
Vancouver	15-May-2009	**Prof. Lang Tong** (Cornell University): "Flow Detection and Anonymous Networking." See announcement for details.
Chapter	Dates	Other Upcoming Events
Singapore	April 2009	by **Prof. Sheila Hemami** (Cornell University). Contact Tan Yap Peng [EYPTan AT ntu.edu.sg] for updates.
Coastal Los Angeles	18-May-2009	**Prof. Tho Le-Ngoc** (McGill University, Montreal, Canada): "Advances in Broadband Access Communications." See announcement for more information.
Greece	17-October-2009	**Joint EURASIP-IEEE/SPS Greek Signal Processing Day**. Full day event features SPS Distinguished Lecturers Profs. Renato De Mori, Sergios Theodoridis and Nikos Sidiropoulos, and other speakers.

If you are interested in organizing a new SPS chapter, or participating in activities in a SPS local chapter near you, please check out **Local Chapter Resources**. Additional questions and comments can be addressed to the SPS

Chapters Committee.

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6. Technical Initiatives, Trends, and Standards

A View of the Future of Signal Processing

What is the Future of Signal Processing? A former IEEE SPS Technical Achievement Awardee, John Treichler, shared his view through a two-part article featured in the "**Exploratory DSP**" Column of the March and May 2009 issues of the IEEE Signal Processing Magazine. Adapted from a presentation made to the Society's Long-Range Planning and Implementation Committee in Fall 2008, the article analyzes the past for useful historical patterns and then attempts to extend them into the future to predict what the signal processing field will look like and what important issues should be addressed over the next 20 years.

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7. SP Education and Resources

Teach-ware: Signal Processing Resources at Connexions

Connexions is a platform and environment for scholars to collaboratively develop and rapidly publish educational materials on the Web. It is based on a new approach to education that seeks to provide a place where everyone in the world can freely share knowledge, and it provides equal access to all people via tools that permit everyone ranging from university professors to school children to post and update knowledge in one place. The "**Best of the Web**" column by D. Yu and L. Deng in the March 2009 issue of the IEEE Signal Processing Magazine presents signal processing education resources available at Connexions.

Leading a Start-Up in an Enterprise: Lessons learned in creating Microsoft Response Point

For many of us who have worked on technologies, a dream simply won't quit. This dream is to bring the miraculous technology we have researched and refined for many years to the mass market. This dream is to offer the public a new feature, a new product, or a new service, derived from the great technology we helped to create, to make the world a much better place. The "**DSP Education**" column of the March 2009 issue of the IEEE Signal Processing Magazine features an article by X.D. Huang, who shares his experience and lessons learned since founding Microsoft's speech-technology group 16 years ago with a dream to help bring speech-recognition technologies to the public.

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8. New Ph.D. Theses

Michael E. Mavroforakis (University of Athens, Greece):
"**Geometric Approach to Statistical Learning Theory through Support Vector Machines (SVM) with Application to Medical Diagnosis**," October 2008. Advised by Prof. Sergios Theodoridis.

The thesis deals with problems of Pattern Recognition in the framework of Statistical Learning Theory, using Support Vector Machines (SVMs). The focus of this work is on the geometric interpretation of SVMs, which is accomplished through the notion of Reduced Convex Hulls (RCHs). The major contributions are: a) the extension of the mathematical framework of RCHs with a set of theoretical results, which restrict the expression of the extreme points of the RCHs and provide an analytic form of their projection onto a specific direction, b) the derivation of novel, efficient and intuitive geometric algorithms for the solution of the general SVM optimization task, and finally, c) the application of the SVM algorithms to the field of Medical Image Analysis and Diagnosis of mammography.

Click here to access the thesis by the author.

Toon van Waterschoot (Katholieke Universiteit Leuven, Belgium):
"**Design and Evaluation of Digital Signal Processing Algorithms for Acoustic Feedback and Echo Cancellation**," March 2009. Advised by Prof. Marc Moonen.

This thesis deals with several open problems in acoustic echo cancellation and acoustic feedback control. Our main goal has been to develop solutions that provide a high performance and sound quality, and behave in a robust way in realistic conditions. This can be achieved by departing from the traditional ad-hoc methods, and instead deriving theoretically well-founded solutions, based on results from parameter estimation and system identification. In the development of these solutions, the computational efficiency has been taken into account as a design constraint, in that the complexity increase compared to the state-of-the-art solutions should not exceed 50% of the original complexity.

Click here to access the thesis by the author.

Interested in submitting or recommending a recent Ph.D. thesis?
Please prepare the following material and visit the web submission site to provide your input. Contact Associate Editor Prof. Alessandro Piva at <alessandro.piva AT unifi.it> if you have any questions.
(1) thesis author's information (full name, contact, current affiliation, URL if available), Ph.D. granting institution, thesis advisor's name and contact information;
(2) title, URL, and a short summary of the thesis (100-150 words); and
(3) an email from the thesis advisor to Associate Editor at <alessandro.piva AT unifi.it>, confirming that the author has already successfully defended the Ph.D. thesis and that a final version of the thesis has officially been submitted according to the Ph.D. degree requirements of the author's institution.

9. New Books

QRD-RLS Adaptive Filtering,
Edited by Jose Antonio Apolinario Jr., Springer, 2009.

Description from the publisher: This book provides tools and knowledge in a simple way such that the reader is able to implement a particular QRD-RLS algorithm tailored for the application at hand. The material presents not only classical and recent research results but also the expertise of a number of authors that have contributed to the development of this fast converging class of adaptive filter algorithms. The intended audience encompasses graduate students, researchers, and practitioners working in the field of adaptive filtering or in need of using a robust and fast converging algorithm.

Visit the book's website for table of contents and more information.

Bayesian Signal Processing: Classical, Modern and Particle Filtering Methods,
By James V. Candy, John Wiley/IEEE Press, 2009.

Description from the publisher: Bayesian-based signal processing is expected to dominate the future of model-based signal processing for years to come. This book develops the "Bayesian approach" to statistical signal processing for a variety of useful model sets with an emphasis on nonlinear/non-Gaussian problems, as well as classical techniques. Current applications and simple examples motivate the models and prepare the reader for developments in subsequent chapters. Although designed primarily as a graduate textbook, Bayesian Signal Processing is also useful to signal processing professionals and scientists.

Visit the book's website for more information.

Mobile Multimedia Broadcasting Standards: Technology and Practice,
Edited by Fa-Long Luo, Springer, 2008.

Description from the publisher: This volume provides a comprehensive and cohesive compilation of multi-standards and systems for mobile multimedia broadcasting. The material includes coverage of the basic principles, algorithms, and design trade off as well as examples of software and hardware that have been implemented at the system level.

Visit the book's website for more information.

Books Featured in Previous Issues [details]

Pattern Recognition, 4th Edition,
by Sergios Theodoridis and Konstantinos Koutroumbas, Elsevier, 2009.

Handbook of Biosensors and Biochips,
Edited by R.S. Marks, D.C. Cullen, I. Karube, C.R. Lowe, and H.H. Weetall, Wiley, 2007.

Microscope Image Processing,
by Qiang Wu, Fatima Merchant and Kenneth Castleman, Elsevier, 2008.

Partial-Update Adaptive Signal Processing,
by Kutluyil Dogancay, Elsevier, 2009.

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10. Research Opportunities

Two-Year Post-Doc position at NICTA Canberra Research Laboratory, Australia

NICTA Canberra Research Laboratory, Australia, is seeking a Postdoctoral Research Fellow to support a research project in signal and image processing for brain connectivity estimation. The project involves international collaboration with Montreal Neurological Institute, McGill University, Canada. Applicants must have a Ph.D. (or be close to completion) in electrical engineering or a related field (such as mathematics or statistics), with a proven capacity for high-quality research and an international publication record. Previous research experience in signal and image processing is desirable. Remuneration will be competitive, and commensurate with the applicant's qualifications and experience. The positions are available immediately for a term of up to two years. Review of applications will begin immediately and continue until suitable candidates are found.

To apply, please email a CV, including list of publications, and the names and contact details for two referees, to <Abd-krim.seghouance AT nicta.com.au>. Further information regarding the position can be found on the NICTA website. Should you have any further queries, please contact Dr. Seghouane by email

or by phone +612 62676229.

Research Position Featured in Previous Issue [details]

- PhD Scholarship on Neuroimaging based Brain Network Comparison at The University of Groningen, The Netherlands

- Two Postdoctoral Research Fellowships in Signal Processing/Communications at The University of Newcastle, Australia

- Post-doctoral / Research Associate position in inverse imaging for semiconductor manufacturing at University of Hong Kong

- Ph.D. position in mathematical statistics - reliable detection of explosives and narcotics at Lund University, Sweden

- Post-doctoral research fellow on image quality assessment at University of Nantes, France

Job Posting Portals

http://careers.ieee.org/
http://jobs.phds.org/jobs/engineering/
http://engineering.academickeys.com/seeker_job.php

Interested in advertising graduate scholarship, post-doc positions, or funding opportunities?

Please prepare a short text of the announcement (150-200 words) and visit the web submission site to enter your input. It is recommended to include the deadline or valid period of the announcement, and an URL for more information such as group/research description and detailed qualification expectation in English. Contact Associate Editor Prof. Alessandro Piva at <alessandro.piva AT unifi.it> if you have any questions. Note that advertisements on faculty and other full-time position are in the domain of IEEE job advertisement (http://careers.ieee.org/g/); the IEEE Signal Processing Magazine also provides opportunities for paid advertisement.

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Contributors of articles in this issue:

Kristine Bell (SAM TC), Xiaoli Ma (SPTM TC), and David Miller (MLSP TC).

About the Inside Signal Processing E-Newsletter

Since April 2007, the IEEE Signal Processing Magazine has introduced a new form of publication - the Inside Signal Processing E-Newsletter. This monthly electronic newsletter will complement the bi-monthly Magazine to serve the members in the IEEE Signal Processing Society (SPS). Through email notification and expanded coverage on its website, the E-Newsletter will provide members with timely updates on:

- society and technical committee news,

- conference and publication opportunities, new books, and Ph.D. theses,

- signal processing related research opportunities, and

- activities in industry consortiums, local chapters, and government programs.

The Inside Signal Processing E-Newsletter is a gateway to reach out to signal processing professionals around the world. We invite you to contribute and share your news with tens of thousands of SPS members through this monthly electronic publication with fast turn-around cycle. IEEE members may manage their subscription of the email notification of the E-Newsletter and related SPS announcements at this page. Please bookmark <http://enews.ieee-spm.org> for current and archived issues of the Inside Signal Processing E-Newsletter.

Submission Instructions - Contribution for the next issue is due May 5, 2009

Visit the web submission site to provide your input. Make sure that you include your name, affiliation, email and phone contact information. Contributions submitted by **May 5, 2009** will be considered for inclusion in the **next issue** of the Inside Signal Processing E-Newsletter. Please contact the Associate Editors of the corresponding sections as listed below if you have questions. Your comments and suggestions on the new submission system are welcome.

Contact Information of the E-Newsletter Team

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Huaiyu Dai, *Associate Editor*, North Carolina State University, Raleigh, USA (huaiyu_dai AT ncsu.edu)
   Conference and publication news (including new books)

Pascal Frossard, *Associate Editor*, EPFL, Switzerland (pascal.frossard AT epfl.ch)
   News and activities of SPS Technical Committees, industry consortiums and international standards

Alessandro Piva, *Associate Editor*, University of Florence, Italy (alessandro.piva AT unifi.it)
   News and activities in local chapters and research groups (including new Ph.D. theses & research opportunities)

Nitin Chandrachoodan, *Digital Production Editor*, Indian Institute of Technology – Madras (nitin AT ee.iitm.ac.in)
   Online submission and production system

Li Deng, *SPM Editor-in-Chief*, Microsoft Research, Redmond, WA, USA (deng AT microsoft.com)

* Please replace "AT" in the email addresses with @.

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In-Depth E-News Article

Activity Report from the Sensor Array and Multichannel (SAM) TC

by Kristine Bell (TC Chair)

The Sensor Array and Multichannel (SAM) Technical Committee (TC) addresses the areas of sensor array and multi-channel statistical signal processing. The committee interests span the areas of signal detection and estimation, direction-of-arrival estimation, beamforming, blind source separation, source localization and tracking, multiple-input multiple-output (MIMO) systems and space-time coding, sensor networks, and multichannel signal processing. The main application areas are focused on radar, sonar, wireless communications, microphone array processing, navigation, seismology, radio astronomy, and biomedicine.

In 2008, the SAM TC sponsored the fifth SAM Workshop (SAM 2008) in Darmstadt, Germany, co-chaired by TC members Alex Gershman and Abdelhak Zoubir. The workshop featured 118 submitted papers and 9 invited distinguished lectures of top experts in the field of sensor array and multichannel processing.

SAM TC members received numerous awards and honors in 2008. Lang Tong was selected as a Distinguished Lecturer for 2009-1010, and five TC members were elevated to Fellow: Yuri Abramovich, Dominic Ho, Raghuveer Rao, Nikos Sidiropoulos, and Xiang-Gen Xia. Goran Dimic and Nikos Sidiropoulos received a Best Paper Award for their Paper "On Downlink Beamforming with Greedy User Selection: Performance Analysis and a Simple New Algorithm," and the SAM TC successfully nominated Jing Liu for a Young Author Best Paper Award for the "On the Design of Minimum BER Linear Space-Time Block Codes for MIMO Systems with MMSE Receivers," co-authored by paper Jian-Kang Zhang and Kon Max Wong.

In December 2008, Kristine Bell was elected as the new SAM TC Chair and Mats Viberg as the new Vice-Chair. Alex Gershman will remain on the TC for an additional year as Past Chair. Four new members were elected: Yuri Abramovich, Olivier Besson, Rick Blum, and Visa Koivunen; and three members will return for their second term: Dan Fuhrmann, Dominic Ho, and Brian Sadler. The TC wishes to thank retiring members Doug Cochran, Hongya Ge, and Luc Vandendorpe for their many years of service on the TC.

Thanks to TC webmaster Peter Willett, the SAM TC has a new website.

Return to TC News

Activity Updates from the Signal Processing Theory and Methods (SPTM) Technical Committee

by Xiaoli Ma (SPTM Liaison to E-Newsletter)

The Signal Processing Theory and Methods (SPTM) Technical Committee (TC) of the IEEE Signal Processing Society (IEEE-SPS) promotes activities within the technical areas of theory and methods of digital and statistical signal processing. The scope of SPTM has a broad span ranging from digital filtering and adaptive signal processing to statistical signal analysis, estimation and detection.

Among the functions of the SPTM committee are: sponsorship of workshops, symposia, special issues of the IEEE Transactions on Signal Processing and special sessions at ICASSP, review of ICASSP paper submissions, nomination of papers for the IEEE SP Society Paper Awards, and nomination of individuals for IEEE SP Society Major Awards. The committee recently elected nine new members whose terms started on January 1, 2009: Mats Viberg, Athina Petropulu, Enis Cetin, Kutluyil Dogancay, Maria Greco, Per Tichavsky, Isao Yamada, Richard Cedric, and Venkatesh Saligrama.

The SPTM TC sponsors two annual workshops. The 2009 Statistical Signal Processing Workshop (SSP'09) will be held August 31-September 3, 2009 in Cardiff, Wales, UK. Serving as the Capital of Wales, UK, and considered as one of Britain's six cities of elegance, Cardiff has a long history going back to the days of the Roman Empire; it is in the proximity of where the first wireless communication by Marconi took place, and has been the host for many international events. The SSP'09 workshop will feature regular contributed paper sessions, special invited paper sessions, and a number of plenary lectures covering basic theory, methods and algorithms, and applications in statistical signal processing. Earlier this year, the Digital Signal Processing (DSP) Workshop and Workshop on Signal Processing Education (SPEd) took place in Marco Island, Florida, USA. Interested readers can follow this link for more details on the event.

The committee is co-sponsoring a thematic symposium on Network Distributed Signal Processing at ICASSP 2009.

Return to TC News

Activity Report -- Machine Learning for Signal Processing (MLSP) Technical Committee

by David Miller (MLSP Liaison to E-Newsletter)

The Machine Learning for Signal Processing Technical Committee (MLSP TC) is at the interface between theory and application, developing novel theoretically-inspired methodologies targeting both longstanding and emergent signal processing applications. Central to MLSP is on-line/adaptive nonlinear signal processing and data-driven learning methodologies. Since application domains provide unique problem constraints and assumptions and thus motivate and drive signal processing advances, the MLSP research naturally has a broad application base for processing of a variety of signals, including audio, speech, image, multispectral, industrial, biomedical, and genomic signals.

Starting from January 2009, Kostas Diamantaras from TEI of Thessaloniki succeeded David J. Miller (Penn State University) as TC Chair. The MLSP TC currently has 25 members, including eight new members with diverse technical talents and interests who started a three-year term from January 2009: Andrzej Cichocki, Gustavo Camps-Valls, Ignacio Santamaria, Peter Schreier, Atsushi Nakamura, Jiebo Luo, Chang Yoo, and Jeronimo Arenas-Garcia. The TC would like to gratefully acknowledge the contributions of members who have completed their service: Lai-wan Chan, Jocelyn Chanussot, Ling Guan, Danilo Mandic, Asoke Nandi, Lucas Parra, Johannes Sveinsson, and Yu-Ping Wang. Also as of January 2009, TC member Tulay Adali was elected Fellow of the IEEE; and Sergios Theodoridis started a two-year term as an IEEE SPS Distinguished

Lecturer.

The MLSP TC sponsors an annual Workshop on Machine Learning for Signal Processing, now in its nineteenth year. The successful 2008 MLSP Workshop chaired by Jose Principe was held in Cancun, Mexico, in Octoboer 2008. The 2009 MLSP Workshop will be held at the foot of the Alps, in Grenoble, France, chaired by Christian Jutten. MLSP 2010 is scheduled to be held in Lapland, Finland, chaired by Erkki Oja and Sami Kaski.

The TC organizes a special session on "Signal Processing for Improper and Noncircular Complex-valued Data" at ICASSP 2009 (organized by P. Schreier and T. Adali), and a special session on "Advances in Remote Sensing Image Processing" at ICIP 2009 (organized by G. Camps-Valls and D. Tuia). In addition to its more traditional research and pedagogical foci, the MLSP-TC has also been actively involved recently in the area of cognitive signal and information processing, developing a new EDICS category in this area and seeking to further define and develop this emerging research area.

Last but not the least, a few books have been finalized recently by TC members: "Statistical Signal Processing of Complex-Valued Data" by Peter Schreier and Louis L. Scharf, "Kernel Methods for Remote Sensing Data Analysis" edited by Gustavo Camps-Valls, and "Adaptive Signal Processing: Next Generation Solutions" edited by Tulay Adali and Simon Haykin.

Return to TC News

IEEE Signal Processing Magazine 2008 - Hosted by the Digital Video and Multimedia Lab at Columbia University
Inside Signal Processing E-Newsletter Hosted by the Communications and Signal Processing Labs at University of Maryland