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IEEE Signal Processing Magazine

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Inside Signal Processing E-Newsletter

September 2008

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Highlights

- [Society News](#): 2008 SPS award nomination deadline approaching
- [Conference News](#): ICASSP'09 Taipei deadline approaching; Upcoming ICIP'08 in San Diego
- [Publication News](#): IEEE Signal Processing Letters going E-Publication; Special issue deadlines
- [TC News](#): Exclusive report from Design & Implementation of Signal Processing Systems TC
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From the E-Newsletter Team:

Learn about the features and plans for the E-Newsletters from the September 2008 Editorial "[A Window to the SP Community](#)" in the IEEE Signal Processing Magazine. The [E-Newsletter Team](#) sincerely welcome your feedback and contributions.

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 <http://ewh.ieee.org/enotice/options.php?LN=SP001>.

1. Society News

Award Nominations	Deadlines	Links
Nomination of 2008 SPS Major Awards: including Society Award, Technical Achievement Award, Education Award, Meritorious Service Award, Best Paper Awards, Young Author Best Paper Awards, Signal Processing Magazine Best Paper Award, and Signal Processing Magazine Best Column Award.	October 1, 2008	Nomination info. can be found online .
Nomination of 2009 IEEE Technical Field Awards: including IEEE James L. Flanagan Speech and Audio Processing Technical Field Award sponsored by the SPS.	January 31, 2009	Nomination info. can be found at this link .

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2. Conference News

ICASSP'09 Paper Submission Due 29 September 2008. Please visit the [online submission site](#). More details on the ICASSP 2009 program, tutorials, exhibits, detailed paper submission procedures, and the Industry Technology Track (ITT) can be found at <http://icassp09.com>.

ICIP 2008 Call for Participation – Oct. 12-15, 2008, San Diego, CA, USA

ICIP is the world's premier conference focused on image processing and its applications. The conference will feature internationally reputed speakers, tutorials, exhibits, and over 50 lectures and poster sessions, including six special oral sessions. For the first time, there will also be a one-day workshop this year on "Multimedia Information Retrieval: New Trends and Challenges" that will feature invited talks, oral and poster presentations.

This year's conference venue is the San Diego Convention Center, located downtown directly on the waterfront. San Diego Bay is renowned for its temperate Mediterranean climate and offers 70 miles of pristine beaches and a dazzling array of world-class family attractions. ICIP 2008 will host a students'

reception on Wednesday, October 15, 2008, and a reception with sumptuous Mexican fare on Tuesday, October 14, 2008, for all the conference attendees. Learn more about the upcoming conference from this [Conference Spotlight article](#) in the recent issue of the IEEE Signal Processing Magazine and visit the [conference website](#) for up-to-date information.

Signal Proc. Conferences: Call for Papers	Location	Date	Tutorial/Special Session	Submission Deadline
IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP'09)	Taipei, Taiwan	April 19-24, 2009		Sept. 29, 2008
6th IEEE International Symposium on Biomedical Imaging (ISBI'09)	Boston, MA	June 28-July 1, 2009		January 19, 2009
IEEE International Conference on Multimedia and Expo (ICME'09)	Cancún, Mexico	June 28-July 3, 2009	Dec. 1, 2008 (special session) Jan. 31, 2009 (tutorial)	December 31, 2008
10th IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC'09)	Perugia, Italy	June 21-24, 2009		January 30, 2009

Upcoming Signal Processing Conferences	Location	Advanced Registration	Conference Dates
2nd International Symposium on Microwaves, Radar and Remote Sensing (MRRS'08)	Kiev, Ukraine		Sept. 22-24, 2008
10th International Workshop on Signal Processing for Space Communications (SPSC'08)	Rhodes Island, Greece		Oct. 6-8, 2008
IEEE Workshop on Multimedia Signal Processing (MMSP'08)	Cairns, Australia		Oct. 8-10, 2008
IEEE Workshop on Signal Processing Systems (SiPS'08)	Washington, DC		Oct. 8-10, 2008
IEEE International Conference on Image Processing (ICIP'08)	San Diego, CA		Oct. 12-15, 2008
IEEE Workshops on Machine Learning for Signal Processing (MLSP'08)	Cancún, Mexico		Oct. 16-19, 2008
IEEE International Conference on Natural Language Processing and Knowledge Engineering (NLP-KE'08)	Beijing, China		Oct. 19-22, 2008
IEEE Conference on Sensors (SENSORS 2008)	Lecce, Italy		Oct. 26-29, 2008
9th International Conference on Signal Processing (ICSP'08)	Beijing, China	Sept. 20, 2008	Oct. 26-29, 2008
8th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT 2008)	Sarajevo, Bosnia and Herzegovina	Nov. 1, 2008	Dec. 16-19, 2008
13th IEEE Digital Signal Processing Workshop (DSP'09) and 5th IEEE Workshop on Signal Processing Education (SPE'09)	Marco Island, FL	Oct. 15, 2008	January 4-7, 2009

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3. Publication News

Signal Processing Letters Chartering a New Course

The IEEE Signal Processing Letters (SPL) is currently undergoing significant innovation. To better serve our membership and to better reflect the rapid publication nature of Letters, SPL has become an *electronic only* monthly publication available to all members of the Society since January 2008. As an archival journal delivered electronically, SPL's primary goal is to provide rapid publication of highly original, significant contributions and timely cutting-edge ideas in all areas within the field of interest of the IEEE Signal Processing Society. The SPL's rapid ascend in the Electrical and Electronic Engineering "citations and impact ranking list" suggests a growing number of submissions, increased publication standard, and an attractive opportunity for contributors to disseminate their new ideas and research results possibly well beyond the reach of specialty journals. Read more about the SPL new initiatives through this [in-depth report](#).

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

- [Game Theory in Signal Processing and Communications](#) - Whitepaper Due **15 October 2008**
- [Columns/Forums](#) rolling submission deadlines
- Proposals invited for special issues and feature articles ([details](#))

Special Issue Deadlines of SPS Publications

Journal of Selected Topics in Signal Processing ([website](#))

- [MIMO Radar and its Applications](#) - Deadline: 20 January 2009
- [Compressive Sensing](#) - Deadline: 20 February 2009

IEEE Transactions on Audio, Speech, and Language Processing ([website](#))

- [Signal Models and Representations of Musical and Environmental Sounds](#) - Deadline: 15 December 2008
- [Voice Transformation](#) - Deadline: 1 April 2009

Recent Issues of SPS Sponsored and Co-sponsored Publications

Journal Title	Latest Issue	Contents (in PDF)	Xplore Link
IEEE Signal Processing Magazine - Feature Articles on <ul style="list-style-type: none"> • Discriminative Learning in Sequential Pattern Recognition • Single-Carrier Frequency Domain Equalization • Finite-State Markov Modeling of Fading Channels • Distributed Synchronization in Wireless Networks 	vol. 25, no. 5	PDF	Html
IEEE Transactions on Audio, Speech, and Language Processing	vol. 16, no. 7	PDF	Html
IEEE Transactions on Image Processing	vol. 17, no. 9	PDF	Html
IEEE Transactions on Information Forensics and Security	vol. 3, no. 3	PDF	Html
IEEE Transactions on Signal Processing	vol. 56, no. 9	PDF	Html
IEEE Signal Processing Letters	vol. 15	Recent Articles (PDF , Html)	Html

IEEE Journal of Selected Topics in Signal Processing	vol. 2, no. 3	PDF	Html
<ul style="list-style-type: none"> Genomic and Proteomic Signal Processing 			
Journal Title	Latest Issue	Contents (in PDF)	Xplore Link
IEEE Transactions on Medical Imaging	vol. 27, no. 9	PDF	Html
IEEE Transactions on Mobile Computing	vol. 7, no. 10	PDF	Html
IEEE Transactions on Multimedia	vol. 10, no. 5	PDF	Html
IEEE Sensors Journal	vol. 8, no. 9		Html
IEEE Transactions on Wireless Communications	vol. 7, no. 8	PDF	Html
Computing in Science & Engineering Magazine	vol. 10, no. 5	PDF	Html
IEEE MultiMedia	vol. 15, no. 2	PDF	Html

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4. TC News

Design and Implementation of Signal Processing (DISPS) Technical Committee

The Design and Implementation of Signal Processing Systems (DISPS) Technical Committee promotes and supports activities of the IEEE Signal Processing Society in the areas of design, development, and implementation of signal processing systems; design of algorithms with implementation in mind; and design of software tools and methodologies to support the design of signal processing systems.

The scope of the TC has evolved over the years, largely because pure application-specific integrated circuits (ASICs) are rapidly diminishing in their overall contribution to the IC market, and system-on-chip (SoC) devices are increasing even more rapidly. Learn more about the areas of interests and recent activities of the TC through this [exclusive 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 [2007 and 2008 Distinguished Lecturers](#), and check each issue of the E-News for upcoming SPS Distinguished Lectures near you.

Chapter	Dates	SPS Distinguished Lectures
Central Indiana	25-Sept-2008	Dr. Amy Reibman (AT&T Labs-Research). Contact Chapter Chair Ilya Pollak [ipollak AT ecn.purdue.edu] for more information.

Queensland, Australia	7 and 8-Oct-2008	Prof. Tsuhan Chen (Carnegie Mellon University): talk in Brisbane and Townsville, Queensland on 7 October, and in Adelaide, South Australia, on 8 October. Contact Chapter Chair Garry Einicke [garry.einicke AT csiro.au] for more information.
Atlanta, GA	16-Oct-2008	Prof. Georgios Giannakis (University of Minnesota). Contact Chapter Chair Ryan Robert Holman [ryh30332 AT hotmail.com] for more information.
Toronto, Canada	3-Nov-2008	Prof. Walter Kellermann (University of Erlangen-Nuremberg, Germany). Contact Chapter Chair Sri Krishnan [krishnan AT ee.ryerson.ca] for more information.
Serbia and Montenegro	5 and 7-Nov-2008	Prof. Petar M. Djuric (SUNY Stony Brook). Contact Chapter Chair Dr. Reljin Branimir [reljinb AT etf.bg.ac.yu] for more information.
Western Puerto Rico	6-Nov-2008	Dr. Amy Reibman (AT&T Labs-Research). Contact Chapter Chair Rogelio Palomera-Garcia [palomera AT ece.uprm.edu] for more information.
Chapter	Dates	Other Upcoming Events
Dallas	5-Sept-2008	Prof. Tareq Al-Naffouri (Fulbright Scholar at USC), "Indefinite Quadratic Forms in Gaussian Random Variables: Distribution, Scaling and Application to the Broadcast Channel." See detailed announcement for more information.
Santa Clara Valley	15-Sept-2008	Dr. Ton Kalker (Hewlett-Packard Labs), "Past and Future of Digital Watermarking". See chapter web site for more information.
Central Texas	18-Sept-2008	Peter Mullarkey (NetQos), "Network Behavior Analysis." See detailed announcement for more information.
Germany	25-Sept-2008	Garry Einicke (CSIRO Exploration & Mining), "Optimal Minimum Variance Smoothing." See detailed announcement for more information.
Santa Clara Valley	20-Oct-2008	Dr. Hubert Harrer (IBM - Server and Technology Group), "Multichip module packaging and its impact on architecture". See chapter web site for more information.

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. New Initiatives and Trends

Signal Processing for Cognitive Assistive Technologies in Smart Home

Technological supports for people with disabilities are usually referred to as *assistive technology*. Although there has been significant work in developing technologies to support people with mobility and sensory disabilities, developing assistive tools for people with cognitive disabilities has not been as widespread. Cognitive disabilities, which can begin at any age and are affecting over 22 million people in U.S., is a substantial limitation in one's capacity to think, including conceptualizing, planning, sequencing thoughts and actions, remembering, interpreting subtle social cues, and manipulating numbers and symbols.

The [Exploratory DSP column](#) in the September 2008 issue of the IEEE Signal Processing Magazine features an article on cognitive assistive technologies by M.R. Lightner and D. Erdogmus. Learn more from this article about smart home technologies and signal processing challenges to assist people with cognitive disabilities.

DVB-H Mobile Broadcast Standard

The digital video broadcasting-handheld (DVB-H) standard is one of the latest transmission standards developed by the digital video broadcasting (DVB) Project. DVB-H is based on the standard for digital terrestrial television (DVB-T) and offers mobile television and other broadcasting services on small portable devices such as mobile phones. The [Standards in a Nutshell](#) article by M. Kornfeld and K. Daoud in the July 2008 issue of the IEEE Signal Processing Magazine presents an overview of the DVB-H standard with respect to structure, features, technology, performance, and resources.

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7. SP Education and Resources

Interested in **Network Multicast with Network Coding**? Learn basic ideas, concepts, and power of network coding from the [Lecture Notes](#) by E. Soljanin in the September 2008 issue of the IEEE Signal Processing Magazine.

Do you know? The **Best of the Web** column in the IEEE Signal Processing Magazine presents online resources of interest to signal processing professionals.

- "TeachWare: Audio Resources" by D. Ellis and Y.E. Kim ([May 2008](#))
- "EvalWare: Virtual Reality and Visualization Resources" by W. Jarosz, M. Zwicker, and J. Schulze ([July 2008](#))

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8. New Ph.D. Theses

Karim G. Seddik (University of Maryland, College Park, USA):

"Diversity in Cooperative Networks: How to Achieve and Where to Exploit?" April 2008.

Advised by Prof. K.J. Ray Liu.

Recently, there has been much interest in modulation techniques to achieve transmit diversity motivated by the increased capacity of multiple-input multiple-output (MIMO) channels. It is affordable to equip base stations with more than one antenna, but it is difficult to equip small mobile units with more than one antenna. In such a case, transmit diversity can only be achieved through user cooperation leading to what is known as cooperative diversity. Cooperation provides a new dimension over which higher diversity orders can be achieved. This thesis considers the design of protocols that allow several terminals to cooperate via forwarding each other's data, which can increase the system reliability by achieving spatial cooperative diversity. We focus on the problem of how to achieve and where to exploit diversity in cooperative networks.

Click [here](#) to access the thesis, or contact the author at <kseddik AT gmail.com> for more information.

Kuo-ching Liang (Columbia University, USA):

"Applications of Monte Carlo Signal Processing in Bioinformatics," August 2008.

Advised by Prof. Xiaodong Wang.

This thesis focuses on the application of Monte Carlo methods to solving problems in bioinformatics. More specifically, we want to be able to translate biological, genomic, and proteomic problems into mathematical problems by modeling them using discrete state-space hidden Markov models. Unknown parameters are modeled with prior distributions, and are estimated jointly with the unknown states. Depending on the type

of problem, the model can also be formulated in a batched or sequential manner. We show that in most cases, even when the problem is batched in nature, the sequential approach provides better performance, and more efficient in terms of computational complexity. In this thesis, we present applications of this methodology to problems such as DNA sequence base-calling, discovery of motifs in DNA sequences, phasing of haplotypes for diploid organisms, and the prediction of secondary structure for proteins based on amino acid sequences.

Contact the author at <kcliang AT ee.columbia.edu> for more information about the thesis.

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 <piva AT lci.det.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.

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9. New Books

Ultra Wideband Signals and Systems in Communication Engineering

by Mohammad Ghavami, Lachlan Michael, and Ryuji Kohno, Wiley, 2nd edition, 2007.

[Description from the publisher](#): Ultra Wideband (UWB) is a hot new topic in wireless communication engineering today. High-speed communication over short distances using sub-nanosecond pulses, rather than conventional sinusoidal waves, has paved the way for cheap wireless transceivers, capturing the imagination of both academics and engineers in industry alike. *Ultra Wideband Signals and Systems in Communication Engineering* focuses on the basic signal processing that underlies current and future ultra wideband systems, ensuring this text will be essential reading even as UWB applications mature and change or regulations regarding ultra wideband systems are modified.

An in-depth review is available in the [September 2008](#) issue of the IEEE Signal Processing Magazine. Visit the [book's website](#) for detailed Table of Contents and ordering information.

Books Featured in Previous Issues [\[details\]](#)

Mathematics of Digital Images: Creation, Compression, Restoration, Recognition, by S.G. Hoggar, Cambridge University Press, 2006.

Nonlinear Digital Filters: Analysis and Applications, by W. K. Ling, Elsevier, 2007.

Wireless Sensor and Actuator Networks: Technologies, Analysis and Design, by R. Verdone, D. Dardari, G. Mazzini and A. Conti, Elsevier, 2008.

Data Compression: The Complete Reference, 4th Edition, edited by D. Salomon, Springer, 2007.

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10. Research Opportunities

Three-Year PhD Studentship on Variational Bayesian Filtering for Telecommunications at Trinity College Dublin, Ireland

A PhD studentship is available in the Department of Electronic and Electrical Engineering at Trinity College Dublin, commencing this autumn 2008. The project is at the heart of a collaboration with leading research institutes in Paris and Prague. The aim of the research is to develop new algorithms for Bayesian filtering using the variational Bayes approximation.

The successful applicant will be a national of any country and have a primary degree with a strong mathematical emphasis. Course credits in statistical signal processing, probability and telecommunications will be desirable, but not essential. The candidate will ideally be available to begin their studies in October 2008, and will spend one month each with collaborating partners in Paris and Prague, in 2009 and 2010 respectively. The studentship will be up to the value of EUR 17,000 per annum, and all university fees will be paid. A travel stipend for the collaborative visits (above) and for conference presentations will also be provided. Candidates should contact Dr. Anthony Quinn [aquinn AT tcd.ie]. The formal application is by way of a full CV, with the names of two referees, and the deadline is 25th September 2008. In addition to this PhD studentship, a post-doctoral research post of 18 months duration will be available from October 2009. Anyone interested is encouraged to contact Dr. Quinn at [aquinn AT tcd.ie].

Postdoctoral Researcher Positions on Video Event Detection and Retrieval at Columbia University, USA

Columbia University Digital Video and Multimedia group is looking for a postdoc researcher to join projects on video event detection and retrieval. Candidates with strong analytic background and software prototyping skills are preferred. Experiences with video content analysis, video event detection, and machine learning are required. The [DVMM Lab](#) at Columbia University is dedicated to research of new systems, algorithms, and theories for multimedia content analysis, search, protection, and transmission. Current research activities focus on multimedia retrieval, semantic concept detection and search, image forensics, and emerging Internet media computing applications. Interested candidates may send research statement and resume to Prof. Shih-Fu Chang <sfchang AT ee.columbia.edu>.

Postdoctoral and Ph.D. Researcher Positions on Multi-sensor Signal Processing at Darmstadt University of Technology, Germany

The Communication Systems Group at Darmstadt University of Technology (Germany) invites applications for Postdoctoral and Ph.D. researcher positions in the field of multi-sensor signal processing. The positions will be available from the beginning of 2009. The research will be supervised by Prof. Alex Gershman. We offer very competitive salaries and facilities that are among the best in the world. Candidates are expected to have a strong academic record, and should demonstrate their solid knowledge in math, statistics and probability theory, estimation and detection theory, and signal processing. Knowledge of communication and information theories will be an asset. Graduates from internationally well-known universities with top 5% records in their classes are particularly encouraged to apply. Candidates should send their full CV to Prof. Gershman at [gershman AT nt.tu-darmstadt.de]. More information about the Signal Processing Group at Darmstadt University of Technology can be found [here](#).

Ph.D. Research Assistantship to Explore the Potential of DSP for Digital Terrain Elevation Data at the Netherlands Defense Academy and Delft University of Technology

With today's digital signal processing capabilities, it becomes possible to optimize the performance parameters of a navigation system for a particular set of intended applications. The Netherlands Defense Academy and the Delft University of Technology are providing an opportunity of a Ph.D. research assistantship to explore opportunities in the field of Terrain Reference Navigation (TRN) by using digital signal processing techniques that were originally developed for the acquisition and tracking of GPS signals. The goal of the research is to contribute to the creation of a design framework which can be used to match technology and processing concepts to a particular set of navigation system performance requirements. The focus lies on exploring the potential of various digital signal processing concepts for matching a set of distance measurements with a stored database of the environment.

The candidate should hold a Master's degree in electrical engineering, computer science, applied mathematics or any other relevant study with substantial knowledge on data processing. Research will be conducted both at the Netherlands Defense Academy and at Delft University of Technology. Leaders of the project are established researchers in the field of applied mathematics, geomatics and electronics. Contact Prof. P.J. Oonincx, Netherlands Defense Academy, at [pj.oonincx AT nlda.nl]. More information about the Netherlands Defense Academy can be found [here](#).

Research Position Featured in Previous Issue [\[details\]](#)

- Ph.D. Research Fellowship in Ocean Tomography at Technical University of Lisbon
- Ph.D. Research Assistantship in Statistical Signal Processing at Uppsala University, Sweden
- Research Associate in Systems and Control at Uppsala University, Sweden

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. 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/>); the IEEE Signal Processing Magazine also provides opportunities for paid advertisement.

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Contributors of articles in this issue:

Shuvra Bhattacharyya, Alex Gershman, K.J. Ray Liu, and Kostas Plataniotis.

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 September 25, 2008

Visit the [web submission site](#) to provide your input. Make sure that you include your name, affiliation, and email and phone contact information. Contributions submitted by **September 25, 2008** 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

Min Wu, *SPM Area Editor for E-Newsletter*, University of Maryland, College Park, USA (minwu AT umd.edu)

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)

Mihaela van der Schaar, *Associate Editor*, University of California, Los Angeles, USA (mihaela AT ee.ucla.edu)
News and activities of SPS Technical Committees, industry consortiums and international standards

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

Shih-Fu Chang, *SPM Editor-in-Chief*, Columbia University, New York, USA (sfchang AT ee.columbia.edu)

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

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In-Depth E-News Articles

Signal Processing Letters Chartering a New Course

by Alex Gershman (SPL Editor-in-Chief)
 Kostas Plataniotis (SPL Editor-in-Chief Elect)
 K. J. Ray Liu (Vice President - Publications)



The IEEE Signal Processing Letters (SPL) is currently undergoing significant innovation. To better serve our membership and to better reflect the rapid publication nature of Letters, SPL has become an *electronic only* monthly publication available to all members of the Society since January 2008. As an archival journal delivered electronically, SPL's primary goal is to provide rapid publication of highly original, significant contributions and timely cutting-edge ideas in all areas within the field of interest of the IEEE Signal Processing Society. The SPL's rapid ascend in the Electrical and Electronic Engineering "citations and impact ranking list" (where it moved up 29 positions compared to the previous year), suggests a growing number of submissions, increased publication standard, and an attractive opportunity for contributors to disseminate their new ideas and research results possibly well beyond the reach of specialty journals.

Submissions of broad interest that report substantial advantages in any area within the Society's field of interests, identify emerging areas or have significant implications across the Society are particularly encouraged. The main emphasis is placed on broad appeal, foresight, importance and novelty, such as new ideas with reasonably supported evidence, rather than on the rigor of proof for existing ideas, elaborated derivation with many equations, or extensive simulations with many figures. Submitted manuscripts are expected to contain fresh and highly innovative ideas in the field and demonstrate their engineering relevance, potential, and impact.

Authors are encouraged to submit clearly written, easy to comprehend submissions following the precise requirements listed on the publication's [web page](#). Due to its unique nature among all Society journals and its commitment to rapid publication, SPL considers for publication only short contributions of no more than four pages, preferably even two to three pages, that have not been copyrighted, published or accepted for publication elsewhere. Submissions undergo rigorous peer review by qualified referees. SPL's Editorial Board is committed to reach a decision on publication with a minimum of delay, usually within one month from submission, on the basis of no more than two review rounds. Submissions that are judged unsuitable by the Editorial Board may be rejected without external review, using the "fast reject" track.

Learn more about the SPL new initiative from an upcoming article in the November 2008 issue of the IEEE Signal Processing Magazine. Click [here](#) for information on recently published SPL papers.

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Exclusive Report from Design and Implementation of Signal Processing Systems (DISPS) Technical Committee

by Shuvra Bhattacharyya (DISPS TC Chair)



The Design and Implementation of Signal Processing Systems (DISPS) Technical Committee promotes and supports activities of the IEEE Signal Processing Society in the areas of design, development, and implementation of signal processing systems; design of algorithms with implementation in mind; and design of software tools and methodologies to support the design of signal processing systems.

The scope of the TC has evolved over the years, largely because pure application-specific integrated circuits (ASICs) are rapidly diminishing in their overall contribution to the IC market. In the mean time, system-on-chip (SoC) devices are increasing even more rapidly. And on these SoCs, both ASIC like accelerators and domain- and application- specific instruction set processors are embedded. The latter are a target of the DISPS TC, and we envision that they will remain a very important part of the market, next to the "general DSP processors." This trend is because on one hand, general purpose processors are becoming more powerful, and on the other hand, applications are becoming more complex. For example, H.264 increased the computation load by 10 times compared to MPEG-2. In addition to hardware, the TC also covers such areas as algorithm/architecture co-design, hardware/software co-design, compilers, development tools, etc., that apply to all possible platforms.

SiPS -- the IEEE Workshop on Signal Processing Systems -- is an annual workshop that is organized by the DISPS TC. This series of annual workshops began in the mid-1980s, when it was called the IEEE Workshop on VLSI Signal Processing. Since then the workshop has been held regularly as a major international forum for discussion of new technology progress and innovations in design and implementation of signal processing systems. [SiPS 2008](#) is scheduled to be held on 8-10 October 2008 in the Washington DC Metropolitan Area, USA. More information about the DISPS TC can be found at the [TC website](#).

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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](#)