Newsletter, Volume 19, Number 4, December 2008

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President’s Message

This is the first EURASIP Newsletter after our annual EUSIPCO. This year’s EUSIPCO was held in Lausanne, Switzerland, the place where EURASIP was founded in 1978 and where the first ever EUSIPCO was held in 1980. EUSIPCO-08 was superbly organized by Jean-Philippe Thiran and his team, and I would like to warmly thank and congratulate Jean-Philippe and his co-workers for making it so successful and enjoyable!

EUSIPCO-08 also hosted the biennial EURASIP General Assembly and the EURASIP Administrative Committee (AdCom) Elections. The election results have now also been approved by the EURASIP Advisory Committee. I wish to congratulate Markus Rupp for being re-elected to the AdCom. I also congratulate and welcome our newly elected AdCom Members Ana Isabel Perez-Neira and Abdelhak Zoubir. I am sure that they will find their work for EURASIP relevant, rewarding and enjoyable.

I would also like to express my heartfelt thanks to the AdCom members currently retiring from the Board, Paulo Lobato Correia and Sergios Theodoridis. Paulo has served the Association as AdCom Member for four years and has always been an incredibly punctual Secretary and Treasurer. It has truly been a pleasure to have him on board. Sergios has served the Association for many years as AdCom Member, President and Past-President. I was lucky to have Sergios next to me as Past-President, and I have greatly appreciated his wisdom and friendship. Both Paulo and Sergios will be missed in the AdCom.

The new AdCom’s term will start January 1st, 2009. The new AdCom also has to appoint one of its members to become the new President. The AdCom has already—unanimously—decided that Markus Rupp will be the next EURASIP President. I myself will move into the Past-President seat. Markus is currently reshuffling responsibilities within the new AdCom, and will report on this in the next Newsletter.

Two years ago, when my President term started, I had plans and ideas for EURASIP. Some of the plans have materialized, but then time flies and so many things remain undone. Still, I have found the work for EURASIP very challenging and rewarding, and I am grateful for being given the opportunity to serve as President. I am confident that the many things that remained undone are now in good hands, and I wish Markus all the best in his term!

Finally, in this last Newsletter of the year I should also invite all our members to renew their membership. Our membership fees have been kept at the same level as last year. Those of you who have attended this year’s EUSIPCO have already renewed their membership for 2009 through their conference registration. Those of you who did not attend this year’s EUSIPCO will receive an invitation to renew their membership. We sincerely hope you will indeed continue to support our Association!

Warm wishes for the Winter holidays and the New Year!

Marc Moonen
President
EURASIP Treasurer’s Report

On 1st October 2007 the opening balance, in Euros (€), was as specified in the table below. The currency conversion considered was: 1 CHF = 0.60319€

<table>
<thead>
<tr>
<th>Current accounts:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fortis account</td>
<td>10000,00</td>
</tr>
<tr>
<td>Credit Swiss EURO account</td>
<td>58223,46</td>
</tr>
<tr>
<td>Credit Swiss CHF account</td>
<td>1854,79</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>70078,25</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Savings accounts:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Swiss EURO Money Market account</td>
<td>41891,00</td>
</tr>
<tr>
<td><strong>Total available</strong></td>
<td><strong>111969,25</strong></td>
</tr>
</tbody>
</table>

**Loans to be reimbursed:**

| EUSIPCO ’2007     | 15000,00 |
| EUSIPCO ’2008     | 15000,00 |
| **Total**         | **30000,00** |

**Total** 141969,25

The main EURASIP account movements during the financial period considered are documented in the following two tables, for income and expenses, respectively:

<table>
<thead>
<tr>
<th>Income:</th>
<th>€</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership (incl. Journal subscriptions)</td>
<td>40185,80</td>
<td></td>
</tr>
<tr>
<td>Donations/review charges:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elsevier</td>
<td>10000,00</td>
<td></td>
</tr>
<tr>
<td>EUSIPCO ’2007</td>
<td>6340,00</td>
<td></td>
</tr>
<tr>
<td>Savings account (interests)</td>
<td>785,15</td>
<td></td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>57310,95</td>
<td></td>
</tr>
<tr>
<td>Reimbursed loans:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EUSIPCO ’2007</td>
<td>15000,00</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>72310,95</td>
<td></td>
</tr>
</tbody>
</table>
Expenses: € €

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elsevier (various concepts)</td>
<td>7402,66</td>
</tr>
<tr>
<td>Hindawi (various concepts, incl. Newsletter)</td>
<td>19002,97</td>
</tr>
<tr>
<td>EURASIP Awards</td>
<td>7574,89</td>
</tr>
<tr>
<td>Web Development</td>
<td>6000,00</td>
</tr>
<tr>
<td>Administrative expenses</td>
<td>6732,43</td>
</tr>
<tr>
<td>Taxes, bank costs, interests, currency conversions</td>
<td>159,57</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td><strong>46872,52</strong></td>
</tr>
</tbody>
</table>

Notice that in the financial period considered all the Credit Swiss accounts were closed. The closing balance on the 30th September 2008 was as specified in the table below:

<table>
<thead>
<tr>
<th>Current accounts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fortis account</td>
</tr>
<tr>
<td><strong>total</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Savings accounts:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fortis savings accounts</td>
</tr>
</tbody>
</table>

| **Total available**                        | 137407,68 |

<table>
<thead>
<tr>
<th>Loans to be reimbursed:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUSIPCO ’2008</td>
</tr>
<tr>
<td><strong>total</strong></td>
</tr>
</tbody>
</table>

| **Total**                                  | **152407,68** |

*30th September, 2008*
EURASIP Society Awards Call for Nominations

*The Deadline for Nominations for EURASIP Society Awards is December 31st, 2008*

Each year, EURASIP, the European Association for Signal Processing recognizes technical and professional achievements in signal and image processing technology through its celebrated EURASIP Awards Program. As part of the organization’s overall mission to advance signal and image processing as a science and a profession, EURASIP’s Administrative Committee (AdCom) annually evaluates the contributions of candidates for various awards that span a spectrum of professional and technological accomplishments.

EURASIP Members are invited to nominate candidates for EURASIP Society Awards, that fall into the following categories:

- Meritorious Service Award
- Group Technical Achievement Award
- Technical Achievement Awards
- Athanasios Papoulis Award

For additional information, please visit the EURASIP website at: http://www.eurasip.org/, where details on the nomination process are reported and downloadable copies of the nomination forms can be found. A listing of previous award recipients with their award citations is also available on the EURASIP Awards webpage.

**Where to Submit Nominations**

Nominations for the Society Awards should be submitted to the EURASIP Awards chair, Prof. Fulvio Gini by e-mail (f.gini@ing.unipi.it). The deadline is December 31st, 2008.

We encourage you to share this information with your colleagues and peers.

Sincerely,

Fulvio Gini

EURASIP Awards Chair
The EURASIP PhD Database

The European Signal Processing Association (EURASIP) is developing its PhD database in the area of signal, speech and image processing. This is already a part of the EURASIP open library that incorporates theses, conference and journal papers (see www.eurasip.org, under ‘EURASIP Open Library’ and ‘PhD Links’).

Each year several hundreds of PhD theses are published by European Universities. The EURASIP PhD database will allow a thematic organization of theses and will enable a much wider dissemination. The EURASIP PhD database will be a worldwide valuable source of information and a good indicator of European efforts in the area of signal processing. EURASIP is contemplating a PhD thesis award given yearly based on the number of downloads.

We invite you to have the PhD theses completed in your institution submitted to the EURASIP PhD Links (instructions are given at the mentioned address). Notice that PhD manuscripts can be in any national language (Italian, Polish, …) as long as the abstract and the title (separately submitted) are in English. While, to the large European community, the thesis database will serve as a valuable repository, it will also be a national repository for each country.

Let’s all register all European theses in signal processing and let your institution’s name appear in the database each time a new thesis is produced.

Bulent Sankur
EURASIP AdCom/Publications
Obituary
Francis Schmitt (1949–2008)

The untimely death of Prof. Francis Schmitt marks a huge loss to the signal processing and computer vision scientific community. Prof. Schmitt was a professor in the Telecommunications and Signal processing Department of Ecole Nationale Supérieure des Télécommunications, Paris. He built his career at ENST where he taught and did research for 35 years.

Born in 1949, he received his engineering degree at École Centrale de Lyon, and he obtained his doctorate at Applied Physics from the University of Paris VI Pierre et Marie Curie.

His research activity encompassed a wide range of topics from colour and multispectral imagery to 3D object processing, computer vision, image based modeling, from picture processing applied to cultural heritage to multimedia content-based retrieval. Prof. Schmitt published 238 papers in scientific journals and conferences.

His colleagues and his students will remember dearly his exuberance, his enthusiasm, his jovial character, his readiness to discuss for hours and, of course, his dedication. He was devoted teacher and mentor. He had a knack for simplifying complex problems, but at the same time one question would bring forth a wealth of his domain knowledge and anecdotal stories. In his personal life, he was generous, charming and considerate. He was also a true wine connoisseur. We all mourn with great sorrow his passing, but are very grateful for his life on this earth.

Bülent Sankur
Bogazici University
EUSIPCO-2011 in Athens, Greece

EURASIP’s 2011 European Signal Processing Conference (EUSIPCO-2011) will be held from August 29–September 3, 2011, in Athens, Greece, and will be organized by the Department of Informatics, University of Athens. The conference organization will be undertaken by Sergios Theodoridis and Aggelos Pikrakis. More information will follow at www.eusipco2011.org or can be obtained by contacting the General Chairmen Sergios Theodoridis, stheodor@di.uoa.gr and Aggelos Pikrakis, pikrakis@unipi.gr.

Athens is the capital and largest city of Greece with over four million inhabitants. The city is attractively located in the Attica peninsula, almost in the middle of Greece. The location of Athens permits easy access to most of the popular Greek destinations both in the mainland and the islands of the Saronic Gulf and the Aegean Sea.

Athens is an ancient city with an enormous amount to offer, both to tourists and business travelers. The history of Athens begins more than 3000 years ago during the prehistoric times. The city lived its most glorious times, the Golden Age, during the 5th century BC when the Parthenon was built and democracy, philosophy and the arts developed to their highest point. Athens maintained its role as a centre of cultural and intellectual importance during the Roman and Byzantine times and became the capital of Greece in 1834.

The historical centre of Athens is the most important area of the city for the visitor who wishes to admire the Acropolis, the Parthenon, the new Acropolis museum, the Herodes Atticus Odeon, the ancient theatre of Dionysus and numerous other monuments from the glorious history of the city. The visitor can also enjoy a walk in Plaka, a neighborhood with a unique blend of history and modern life.
After the success of the Athens 2004 Olympic Games and the completion of the construction of major infrastructure projects, including a new public transportation network, Athens has entered a new promising era. The city is gradually establishing itself as an excellent choice of destination for the organization of conventions, international exhibitions and major investments within the framework of the tourist industry. For more information on Greece and the city of Athens, visit www.visitgreece.gr.
## Calendar of Events

<table>
<thead>
<tr>
<th>Year</th>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>EURASIP Involvement</th>
<th>Chairperson/Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>June</td>
<td>7th International conference on Systems, Signals and Image Processing (IWS-SIP ’10)</td>
<td>Rio de Janeiro, Brasil</td>
<td>Cooperation</td>
<td></td>
</tr>
</tbody>
</table>
Call for Papers

The 2009 European Signal Processing Conference (EUSIPCO-2009) is the seventeenth in a series of conferences organised by the European Association for Signal, Speech, and Image Processing (EURASIP, www.eurasip.org). The conference will be held in the Royal Concert Hall in the heart of the city of Glasgow, Scotland. EUSIPCO-2009 will focus on key aspects of signal processing theory, algorithms, architectures, and applications. Acceptance of submissions will be based on quality, relevance, and originality, with awards for the best student submissions. Accepted papers will be published in the proceedings of EUSIPCO 2009 and presented during the conference. Proposals for tutorials and special sessions are invited. The conference will further include a series of keynote and plenary talks, as well as a CEO forum and exhibition.

Areas of Interest

Submissions are invited in, but not limited to, the following areas:

- Audio and electroacoustics
- Design, implementation and application of signal processing systems
- Multimedia signal processing, speech processing and coding
- Image processing and video coding
- Medical imaging and image analysis
- Signal detection and estimation
- Sensor array, multichannel and multidimensional signal processing
- Signal processing for communications and wireless networks
- Non-stationary, non-linear and non-Gaussian signal processing
- Emerging technologies

Submissions

Procedures to submit a paper and proposals for special sessions and tutorials are detailed at www.eusipco2009.org. Submitted papers must be camera-ready, no more than five pages long, and conforming to the standard set out on the EUSIPCO 2009 website. First authors who are registered students can participate in the student paper competition.

Website www.eusipco2009.org

Important Deadlines

- Proposals for special sessions: December 5, 2008
- Proposals for tutorials: February 6, 2009
- Electronic submission of full papers: February 6, 2009
- Notification of Acceptance: April 30, 2009
- Submission of camera-ready papers: May 29, 2009
The owned spectrum allocation model in use today is believed to be obsolete. Firstly due to its intrinsic principle of fixed resource allocation that leads to a supposed spectrum scarcity, later revealed to be a question of non-efficient utilization. Secondly comes into play the need of introducing new wireless applications and services, which have experienced a huge growth in the last couple of decades, and are now supposed to cope with a multitude of already deployed standards. Both scenarios motivate the use of dynamic spectrum access in order to turn primary licensed networks into dynamic spectrum access networks (DSANs). This lends itself to cognitive radio, an enabling technology that will benefit several types of players and help to implement a more efficient approach regarding spectrum requirements in the future.

The aim of this conference is to bring together the state of the art research contributions that address the various aspects of cognitive wireless systems and technologies, including a broad range of communications, networking and implementation issues. We seek original and unpublished work not currently under review by any other journal, magazine or conference.

Important Dates

- Paper Submission Due: 23rd February 2009
- Tutorial Proposals Due: 23rd February 2009
- Special Session Proposals Due: 3rd November 2008
- Acceptance Notification: 20th April 2009
- Camera-Ready Papers Due: 4th May 2009
First Call for Papers

The 6th International Symposium on Image and Signal Processing and Analysis (ISPA 2009) will take place in Salzburg, Austria, from September 16-18, 2009. The scientific program of the symposium consists of invited lectures, regular papers, and posters. The aim of the symposium is to foster interaction of researchers and exchange of new ideas. Prospective authors are invited to submit their manuscripts reporting original work, as well as proposals for special sessions.

Co-Operations and Co-Sponsorships
- European Association for Signal Processing (EURASIP)*
- IEEE Signal Processing Society*
- IEEE Region 8
- IAPR*

Symposium Topics
A. Image and Video Processing  D. Signal Processing
B. Image and Video Analysis  E. Signal Analysis
C. Image Formation and Reproduction  F. Applications

For a detailed list of conference themes please visit ISPA 2009 web site.

Important Dates
Submission of full paper: April 15, 2009
Notification of acceptance/rejection: May 31, 2009
Submission of camera-ready papers and author registration: June 15, 2009

Symposium Venue
Salzburg is a beautiful city in the heart of Europe in Austria. Situated on the northern edge of the Alps, a bit less than 300 kilometres to the west of Vienna and 150 km to the southeast of Munich, it is home to some 150,000 residents. It is best known for its greatest son, Wolfgang Amadeus Mozart, who was born in Salzburg, but also for the famous film “Sound of Music”, which was shot in Salzburg. The old town of Salzburg is an intriguing labyrinth of small streets and beautiful little squares, that retain the original, baroque flair of its building time in the 17th and 18th century. One of the most impressive buildings, however, is the Castle of Salzburg, which is situated on a hill at the heart of Salzburg, majestically overlooking the city.

Author Information
Papers including title, author list and affiliations, figures, results, and references should not exceed six A4 pages. Detailed author instructions are available on the ISPA web site. All submissions will be subject to an international peer-review process. The symposium publications are abstract book and CD-ROM proceedings. Accepted papers will be available through IEEE Publications Center and in IEEEExplore digital library. Authors of accepted papers are required to register and present the paper.

Call for Special Session Proposals
Prospective organizers of special sessions are invited to send proposals to Special Session Co-Chairs, according to instructions provided on the ISPA web site.

Best Student Paper Award
Best Student Paper Award in the amount of 300 EUR will be given to a student author. The student’s name must appear first on the paper and the paper must be presented at the symposium to be eligible for the award.

Social Events
Welcome reception, gala-dinner, and a sightseeing tour of Salzburg.
16th International Conference on Systems, Signals and Image Processing

**IWSSIP 2009**

June 18 – June 20, 2009, Chalkida, Greece

**CALL FOR PAPERS**

The 16th International Conference on Systems, Signals and Image Processing, IWSSIP 2009, will be held in hotel Lucy in Chalkis, Greece during June 18-20, 2009. IWSSIP 2009 follows the successful events previously held in Budapest, Manchester, Poznan, Zagreb, Bratislava, Maribor, Bucharest, Prague Chalkida, and Bratislava. IWSSIP brings together researchers and developers from both academia and industry to report on the latest scientific and theoretical advances, to discuss and debate major issues and to demonstrate state-of-the-art systems.

**Topics of interest**

The program includes keynote and special lectures presented by eminent experts in the field, peer reviewed contributed papers, posters, invited sessions on the same or related topics, industrial presentations and exhibitions about but not limited to the following topics for IWSSIP 2009 conference:

- Signal Processing and Systems
- Artificial Intelligence Technologies
- ICT in E-learning/Consulting
- Video Streaming and Videoconferencing
- Watermarking and Encryption
- Speech and Audio Processing
- Image and Video Processing and Coding
- Multimedia Human-Machine Interface and Interaction
- Multimedia Content Processing and Content Description
- Multimedia Signal Processing
- Multimedia Databases
- Multimedia Data Compression
- Multimedia Systems and Services
- Multimedia Communications, Networking, Services and Applications
- Multimedia Services in NGN
- DVB and IPTV Technologies
- Multicast & Broadcast for IPTV
- Information and Network Security
- Trust and Security systems
- Service Control and Media Delivery in NGN
- Service Selection and Discovery for Multimedia Services
- IMS based NGN Architecture, Services and Protocols
- Next Generation Mobile Networks and Services
- Fixed Mobile Convergence Architectures
- Wireless networks

**Submission of Regular Papers:**

Prospective authors are invited to submit full-length, four-pages long papers, including figures and references. Papers must be submitted electronically by March 2, 2009. Each paper will be reviewed by at least two independent reviewers, and will be accepted based on its originality, significance and clarity. Please note that the submission dates for papers are strict deadlines.

**Publications:**

All accepted papers will be published in Proceedings that will be available at the conference. Extended and enhanced versions of selected papers will be published in scientific journals, as well.

**Conference fees:**

The payment methods will be updated later.
SECOND CALL APRIL 2008

NOLISP ’09
AN ISCA TUTORIAL AND RESEARCH WORKSHOP ON NON-LINEAR SPEECH PROCESSING

After the success of NOLISP’03 held in Le Croisic, NOLISP’05 in Barcelona, and NOLISP’07 in Paris, we are pleased to present

NOLISP ’09 in Vic (Catalonia, Spain); June 25-27, 2009

Local Organizers: University of Vic (UVic)

AIMS OF THE WORKSHOP
Many specifics of the speech signal are not well addressed by the conventional models currently used in the field of speech processing. The purpose of the workshop is to present and discuss novel ideas, work and results related to alternative techniques for speech processing, which depart from mainstream approaches.

FOCUS OF THE WORKSHOP
Contributions are expected in the following domains (non-limited list):

I. Non-Linear Approximation and Estimation
II. Non-Linear Oscillators and Predictors
III. Higher-Order Statistics
IV. Independent Component Analysis
V. Nearest Neighbours
VI. Neural Networks
VII. Decision Trees
VIII. Non-Parametric Models
IX. Dynamics of Non-Linear Systems
X. Fractal Methods
XI. Chaos Modeling
XII. Non-Linear Differential Equations
XIII. Others

All fields of speech processing are targeted by the workshop, namely:

1. Speech Production
2. Speech Analysis and Modeling
3. Speech Coding
4. Speech Synthesis
5. Speech Recognition
6. Speaker Identification / Verification
7. Speech Enhancement / Separation
8. Speech Perception
9. Others

SCIENTIFIC COMMITTEE
Frédéric BIMBOT, IRISA (Rennes, France)
Mohamed CHETOUANI, UPMC (Paris, France)
Gérard CHOLLET, ENST (Paris, France)
Virginia ESPINOSON-DURO, EUPMT (Barcelona, Spain)
Anna ESPOSITO, UNINA (Naples, Italy)
Marcos FAÚNDEZ-ZANUY, EUPMT (Barcelona, Spain)
Christian JUTTEN, GIPSA-Lab (Grenoble, France)
Eric KELLER, Univ. of Lausanne (Lausanne, Switzerland)
Gernot KUBIN, TUG (Graz, Austria)
Stephen Mc LAUGHLIN, Univ.of Edinburgh (Edinburgh, UK)
Enric MONTE-MORENO, UPC (Barcelona, Spain)
Carlos G. PUNTONET, Univ. of Granada, (Granada, Spain)
Jean ROUAT, Univ. of Sherbrooke (Sherbrooke, Canada)
Jordi SOLÉ-CASALS, Univ. of Vic (Vic, Spain)
Isabel TRANCOSO, INESC (Lisboa, Portugal)
Carlos M. TRAVIESO, Univ. LPGC (Canarias, Spain)
Vladimir ZAIATS, Univ. of Vic (Vic, Spain)

SUBMISSION
Prospective authors are invited to submit a 3 to 4-page paper proposal in English, which will be evaluated by the Scientific Committee. Final papers will be due 1 month after the workshop, for inclusion in the CD-ROM proceedings.

Key dates
Submission (full paper): March 15, 2009
Notification of acceptance: April 30, 2009
Workshop: June 25-27, 2009
Final (revised) paper: September 30, 2009

ORGANIZING COMMITTEE: Montserrat CORBERA-SUBIRANA (Uvic), Marcos FAÚNDEZ-ZANUY (EUPMT), Pere MARTI-PUIG (UVic), Moises SERRA-SERRA (UVic), Jordi SOLÉ-CASALS (Uvic), Vladimir ZAIATS (Uvic)

CONTACT: nolisp2009@uvic.cat
WEB SITE: http://nolisp2009.uvic.cat
Call for Papers

The 5th International Conference on Speech Technology and Human-Computer Dialogue

“SpeD 2009”

www.sped2009.ro

Organized by

University POLITEHNICA of Bucharest
Faculty of Electronics, Telecommunications and Information Technology, Speech Technology and Human-Computer Dialogue Laboratory

Romanian Academy - Section for Science and Technology of Information, Research Institute for Artificial Intelligence

Institute for Computer Science - Romanian Academy, Iaşi Branch

Constanţa Maritime University

In cooperation with

The European Association for Signal and Image Processing (EURASIP)

IEEE - Romanian Section

Constanţa, Romania
June 18-21, 2009

The “SpeD 2009” Organizing Committee invites you to attend the 5th Conference on Speech Technology and Human-Computer Dialogue, at Constanţa, Romania. “SpeD 2009” will bring together academics and industry professionals from universities, government agencies and companies to present their achievements in speech technology and related fields. “SpeD 2009” is a conference and international forum which will reflect some of the latest tendencies in spoken language technology and human-computer dialogue research as well as some of the most recent applications in this area.

Topics

- Speech Analysis, Representations and Models
- Spoken Language Recognition and Understanding
- Text-to-Speech Synthesis
- Prosody Models and Generation
- Speech-to-Speech Translation
- Emotions and Expressive Speech Analysis and Synthesis
- Speaker Identification and Verification in Biometric Systems and Security
- Spoken Language Processing in the World Wide Web
- Voice-Based Human-Computer Interfaces
- Speech Interface Design and Human Factors Engineering
- Speech Interface Implementation for Embedded/Network-Based Applications
- Natural Language Processing
- Data Mining and Search in Spoken Documents
- Spoken Dialogue Systems, Applications and Standards
- Dialogue Management

Schedule:

- Notification of participation and brief proposal submission (title, authors, short abstract, contact information for the presenter): December 01, 2008.
- Submission of camera-ready papers (information for authors will be provided on the Conference site): February 01, 2009.
- Notification of acceptance and observations of the reviewers: March 01, 2009.
- Submission of final papers: March 20, 2009.
CALL FOR PAPERS

Cross-layer design refers to a paradigm which exploits dependence between layers to obtain performance gains. In the last decade, a large number of cross-layer designs have been put forward which only recently commenced converging towards a more synthesized and generalized universal cross-layer architecture.

Research on cross-layer design motivates collaboration among researchers from different specialities, such as antenna design, propagation characterization, signal processing, coding, scheduling, networking, etc. This paves the way to innovative solutions for next generation wireless communications systems.

The Second International Workshop on Cross Layer Design (IWCLD 2009) to be held on 11-12 June 2009, in Palma de Mallorca (Island of Mallorca, Spain), will focus on research challenges associated with cross-layer designs.

With Mallorca’s spectacular views, varied landscapes and its historic city centre bursting with life, we expect this event to be truly special.

Prospective authors are invited to submit their contributions of original unpublished research on cross-layer design. Topics of interest for submission include, but are not limited to:

- Cross-layer architectures for wireless communications (3G, 4G, ad-hoc, mesh and heterogeneous networks)
- Cross-layer adaptation for energy minimization in wireless sensor networks
- Cross-layer considerations for specific PHY techniques: MIMO, multi-carrier, space-time coding, etc.
- Cross-layer design for cognitive radio and cognitive networks
- Applications of network coding in cross-layer design
- Cross-layer end-to-end QoS support for wireless networks
- Cross-layer secure mechanisms for future generation wireless networks
- Cross-layer optimization of current standards (WiMAX, W-CDMA, etc.)
- Application-layer adaptation based on cross-layer strategies
- Complexity and scalability issues in cross-layer design
- Signalling for cross-layer protocol interaction
- Design, implementation and testbed results
- Interactions among PHY/MAC/RLC and transport layer protocol
- Cross-layer mobility management and routing protocols
- Security aspects in cross-layer designs.

PAPER SUBMISSION

Papers should be in English, not exceeding 5 double-column pages and should follow paper templates available on the Workshop web site http://www.iwcld2009.org. The proceedings of the workshop will be included in the IEEEExplore database and indexed by EI.

IMPORTANT DATES

Submission deadline: February 2, 2009
Notification of acceptance: March 30, 2009
Final paper due: April 20, 2009

Please visit the conference web site for paper submission procedures and further details about the conference: http://www.iwcld2009.org

This year we received a record number of submissions: 1049 papers were submitted by the submission deadline. To review them, 979 Technical Program Committee members and reviewers did a wonderful job, under the supervision of the 32 area chairs. At the end of this process, 495 papers were accepted as regular papers and 57 in special sessions, leading to an excellent acceptance rate of 50% for regular papers (52% with special session papers). I would like to thank warmly all the authors, reviewers, TPC members and area chairs for their contribution to the quality of this conference.

The conference itself started on Monday, August 25th, with the tutorial and workshop day. Six tutorials took place, on some of the most important and hottest topics of the moment: Distributed Source Coding (by Vladimir Stankovic, Lina Stankovic and Samuel Cheng), Discrete Optimization in Vision and Graphics (by Nikos Komodakis and Ramin Zabih), Noise Robust Speech Recognition (by Jasha Droppo), Compressive Sensing (by Richard Baraniuk), Bayesian Inference (by Dimitris Tzikas) and Ambient Intelligent Media (by Artur Lugmayr).

Then the technical part of the conference started on Tuesday, August 26th. It included 47 regular oral sessions, 13 special sessions and 16 poster sessions, enhanced by 5 plenary talks given by some of the most influential researchers in our field, including Phil Woodland (Cambridge, UK), Yonina Eldar (Technion, Israel), Jeff Fessler (University of Michigan, USA), Claude Lamblin (France Telecom) and Bernhard Schölkopf (Max Planck Institute, Tübingen, Germany). Additionally, this conference was the occasion for two new EURASIP
fellows to give their inaugural lecture: Björn Ottersten (KTH, Sweden) and Pierre Duhamel (Supélec, France). Please notice that most of the presentations of the tutorials and plenary talks are now available on the EUSIPCO-2008 web site (www.eusipco2008.org).

The 750 participants in this edition of EUSIPCO were also able to enjoy a fantastic social program. The welcome reception took place in and outside the Olympic Museum in Lausanne-Ouchy, facing Lake Geneva and the French Alps. The conference banquet started with a cruise on the boat “Lausanne,” followed by dinner in the Casino of Montreux. This event was also the occasion to celebrate the founder of EURASIP, of EUSIPCO, of the EURASIP Signal Processing journal, and the director, for so many years, of the Signal Processing Laboratory of EPFL, Prof. Murat Kunt, who recently retired.

During the banquet, the EUSIPCO-2008 best student paper was given to Cécile Louchet, from the Université Paris Descartes, France, for the paper entitled “Total Variation Denoising using Posterior Expectation” by Cécile Louchet and Lionel Moisan, and the EUSIPCO-2008 best paper award to Alessandro Foi, from the Tampere University of Technology, Finland, for his paper entitled “Practical denoising of clipped or overexposed noisy images.” Congratulations to both of them.

I want to thank all the participants at this conference and I sincerely hope they enjoyed their stay in Lausanne. I look forward to seeing you next year in Glasgow for EUSIPCO-2009.

Papers are available under the EURASIP open Library.

Prof. Jean-Philippe Thiran
EUSIPCO-2008 General Chair
Following the success of the last events, 10 years after the first event, the steering committee of CSNDSP decided to hold the next event at Graz University of Technology/Austria. Graz was the Cultural Capital of Europe 2003. In 2006 CSNDSP was held in Patras/Greece for the first time outside of UK (where the CSNDSP was created) and has started its way to the centre of Europe. CSNDSP has now been recognised as a forum for exchanging ideas among engineers, scientists and young researchers from all over the world on advances in communication systems, communications networks, digital signal processing and other related areas and as a means to provide a focus for future research and developments.

On behalf of the CSNDSP Local Organizing Committee, we welcomed 190 participants (delegates form 42 countries) in Graz (Austria), and 210 in sum were registered. We are glad to point out that the paper submission process went very smoothly. We received around 240 papers from 42 countries. The Technical Program Committee was supported by three colloquium organizers and 11 special session chairs. All of them mobilized over 245 additional reviewers to guarantee a high quality and fair selection process, which resulted in a selection of 181 papers for presentation, which are organized in three parallel sessions (totally 26 sessions, including one poster session). Every paper was reviewed by at least two reviewers and in some cases by three reviewers to ensure high quality and standards.

Statistics on the review results are as follows: Initially, 24% of the submitted papers were rejected and 60% were accepted for oral presentation. The remaining 16% were accepted for poster presentations. We were very grateful for all the hard work done and the support offered by all the reviewers. After the registration process we have got finally 133 papers for oral and 29 papers for poster presentations.

These 162 papers are included into the printed Proceedings (see attached) and in the CD-ROM, because these both publication media were delivered to the participants at the conference. These contributions are also visible in the attached conference programme. From these 162 papers 28 (19 oral and 9 poster) has not been presented at the CSNDSP 08 in Graz. These 28 “No Shows” will not be published in the IEEE Xplore, as we have told to the Non-participants. The CSNDSP ’08 Technical Program features also four invited talks on topical and interesting issues by internationally known scientists. The proceedings are available over the IEEE Xplore now.

Additional all the social events mainly financed by the sponsoring companies (visible on the web-site and on the proceedings), by Land Styria and City of Graz has been very successful. Also these activities are very important for the success of a well done conference. Our activities have also been supported by IEEE SB Graz and the OVE (registration, organisation etc.). Around 75 participants at the CSNDSP ’08 in Graz were members of
IEEE. Also some awards for the best papers has been issued to 5 candidates (see web-site: http://www.csndsp08.tugraz.at/) and additional some participants from developing countries has been selected for a travel grant (see also web-site).

We like to thank EURASIP and in particular Markus Rupp for the support of the conference CSNDSP ’08. A successful conference is only possible, if everybody is doing a great job.

Erich Leitgeb

(Local Chair of the conference CSNDSP ’08)

The 50th International Symposium ELMAR-2008 was organized by the Croatian Society Electronics in Marine-ELMAR, Zadar, Croatia, together with the Department of Wireless Communications, Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia, during 10th, 11th and 12th of September 2008.

ELMAR-2008 symposium was organized in cooperation with The European Association for Signal, Speech and Image Processing-EURASIP. Symposium took place under the technical co-sponsorship of IEEE Region 8 and IEEE Croatia Section. As every year, ELMAR-2008 symposium was supported by its gold sponsor Tankerska plodmanda Zadar.

The ELMAR-2008 symposium programme consists of three keynote talks, and 24 sessions, where 152 papers written by 391 authors were presented. The authors of the papers presented in ELMAR-2008 symposium are prominent researchers from 36 different countries.

The keynote talks were: Univ. Prof. Dr. techn. Markus Rupp from Vienna University of Technology, Austria “Testbeds and Rapid Prototyping in Wireless Systems;” Professor Paul Cross from the Department of Civil, Environmental and Geomatic Engineering, University College London, United Kingdom “GNSS Data Modeling: The Key to Increasing Safety and Legally Critical Applications of GNSS;” and Dr.-Ing. Malte Kob from the Department of Phoniatrics, Pedaudiology, and Communication Disorders, RWTH Aachen University, Aachen, Germany “The Role of Resonators in the Generation of Voice Signals.”

As every year, social events were organized to offer a further opportunity to discuss both technical and non-technical subjects between attendees. The first event was a concert, cocktail, fireworks and symposium dinner as a part of the celebration of the 50th anniversary of the Croatian Society Electronics in Marine-ELMAR and 50th Jubilee International Symposium ELMAR. The second event was the traditional excursion by ship to Telascica Nature Park, and and the third event was a guided Zadar city sightseeing, with cocktail organized by Zadar County Prefect, Mr. Stipe Zrilic.

Mislav Grgic
ELMAR-2008 Program Chair
http://www.elmar-zadar.org/
At this particular occasion Prof. Branka Zovko-Cihlar presented this award to EURASIP AdCom representative Prof. Markus Rupp for lasting support of the ELMAR society over many years.
The third International Conference on Image and Signal Processing (ICISP 2008, http://www.stlo.unicaen.fr/icisp2008/) brought together about 150 researchers from more than 20 countries at the beautiful city of Cherbourg-Octeville, in Normandy, France. Historically, ICISP is a conference resulting from the actions of researchers of Canada, France and Morocco. Second and first editions of ICISP were held in Agadir, Morocco in 2003 and 2001. ICISP 2008 was sponsored by EURASIP (European Association for Image and Signal Processing) and IAPR (International Association for Pattern Recognition).

From 193 full papers submitted, 70 were finally accepted (48 oral presentations, and 22 posters) giving an acceptance rate of 36 percent. We took pride in arranging a one-track conference and could not accept more contributions. The Program Committee members carried out the review process. Each paper was reviewed by at-least two reviewers, and also checked by the conference co-chairs. All the accepted papers have been published in the Springer LNCS 5099 volume.

Available at http://www.springerlink.com/content/kh62881n55g7/

In addition to presentations by the authors of accepted papers, there were also invited talks presented by four prominent researchers:

- “Image Compression with Partial Differential Equations” by Prof. Joachim Weickert, Full Professor of Mathematics and Computer Science at Saarland University, Germany, where he heads the Mathematical Image Analysis Group.
- “Point Pattern Matching in One Dimension: Applications to Music Information Retrieval.” by Prof. Godfried T. Toussaint, Professor Emeritus at the School of Computer Science and the Centre for Interdisciplinary Research in Music Media and Technology at McGill University, Montreal, Quebec, Canada.
- “Fast frequency template matching algorithms using second and higher order statistics” by Prof. Driss Aboutajdine, Full Professor at the Science Faculty of Rabat University, Morocco.
- “Tensor-directed Smoothing of Multi-Valued Images with Curvature-Preserving Diffusion PDE’s” by David Tschumperlé, permanent CNRS researcher in the Image group of the GREYC research laboratory, Caen, France.

The best paper was selected out of a short list of papers that received the highest scores during the review process, while a Committee took the final decision after attending the oral presentations during the first two days of the ICISP 2008 Conference. Finally, the best paper was awarded to Ville Ojanvisu for his paper on “Blur Insensitive Texture Classification Using Local Phase Quantization.” The award was handed out at the conference banquet.
Highlights of the Conference were also the social events. The welcome reception took place in the city hall of Cherbourg-Octeville where invited Speakers received the famous “Parapluie de Cherbourg.” The Conference banquet took place in “La cité de la mer” along with a visit of the Aquarium and of a nuclear submarine.

Information available under: http://www.stlo.unicaen.fr/icisp2008/
The next ICISP will be organized in Trois-Rivières, Québec, Canada in 2010.

**General Chairs**

**Abderrahim Elmoataz**, Université de Caen Basse-Normandie, France.

**Fathallah Nouboud**, Université du Québec à Trois-Rivières, Canada.

**Program Chairs**

**Olivier Lezoray**, Université de Caen Basse Normandie, France.

**Driss Mammass**, Université Ibn Zohr, Morrocco.
Following the success of the previous editions, the Third Workshop on multiMedia Applications over Wireless Networks (MediaWiN 2008) was held in conjunction with the IEEE Symposium on Computers and Communications (ISCC 2008) in the charming landscape of Marrakech, in Morocco. Starting in 2007, MediaWiN has been receiving sponsorship from the IEEE Computer Society and IEEE Communication Society, technical endorsement by the IEEE Technical Committee on Communications Systems Integration and Modeling (CSIM) and support by EURASIP (European Association for Signal-Image Processing).

MediaWiN 2008 attracted a number of very interesting papers and was attended by more than 30 researchers from Europe, North America, and North Africa, confirming the interest for the topics covered by the Workshop. In fact, since the first workshop edition in 2005, the proliferation of wireless access technologies and multimedia applications over IP networks is leading to a growing interest in the convergence between wireless and multimedia. MediaWiN 2008 offered the opportunity to researchers, industry professionals, and academics around the world to meet, present their work, and discuss the latest advances about this convergence.

The Technical Program Committee gathered 41 leading scientists originating from more than 14 countries worldwide. MediaWiN 2008 has attracted 22 submissions and the final technical program encompassed 9 high-quality research papers (the acceptance ratio was 40.9%). All submitted papers were peer-reviewed by at least three independent reviewers (including TPC members and external reviewers) to ensure high quality and standards. We are very grateful for all the hard work done and the support offered by all the reviewers. The Workshop proceedings were published by IEEE and are already available in IEEEXplore.

The Workshop hosted two keynote talks. Prof. Azzadine Boukerche, from University of Ottawa, gave a visionary perspective about pervasive wireless applications for public safety and security. Prof. Saad Biaz, from Auburn University, Alabama, gave another interesting contribution titled “Success and Failures of De-Randomized Congestion losses.”

We would like to dedicate MediaWiN 2008 to the memory of Federico Maguolo, a young brilliant researcher from the University of Padova, Italy, whose sudden loss shocked us all. We are sure that his results and his enthusiasm for the research work will be long remembered.

Detailed information and photos are available at http://mediawin.it.teithe.gr. We are looking forward to meeting you at the Workshop next summer 2009.

Prof. Ilenia Tinnirello, Dr. Periklis Chatzimisios, Prof. Andrea Zanella and Dr. Kostas Pentikousis Workshop Co-Chairs.
The Second International EURASIP Workshop on RFID Technology was held at 7-8 July, 2008 in Budapest, the capital city of Hungary. The conference venue was the University Campus of the Eötvös Loránd University.

The workshop topics cover a wide range of research fields related to RFID systems, such as Electromagnetic field measurements, Antenna design, Multiple antenna systems, Modulation schemes for RFID, Link, system, and network level simulations, Hardware and software implementation issues, Inductive coupling for DC supply, Multi-frequency and broadband tags, Smart tags, programmable tags, and embedded systems, Sensor tags and RFID for asset tracking and localization, Advances in passive long range RFID technology, Manufacturing processes for RFID tags, Applications and industrial experience.

On the conference there were keynote talks and contributed talks as well. The keynote speakers were coming from Austria, Germany and Hungary. The speakers are (in alphabetical order) the following: József Feketü (Computer and Automation Research Institute, Hungarian Academy of Science, Hungary), Dávid Kétszeri (GS1 Hungary), László Rácz (State Printing House Plc., Hungary), Robert Weigel (Friedrich-Alexander-Universität Erlangen, Germany), Harald Witschnig (NXP Semiconductors, Austria). There were 15 submitted papers, 10 of them were accepted (there was one more accepted but withdrawn: the authors did not participate in the conference). The presenters of the 10 contributed talks were coming from five countries. On the conference there were 53 participants from 7 countries. The social programme of the conference was organized on the first evening of the conference: it started with a sightseeing tour by bus which followed with a conference dinner in the Anonymus Restaurant.

One can find further details and pictures about the workshop on the conference homepage: http://eltecrypt.cs.elte.hu/rfid2008/index.html. Papers are available under the EURASIP open Library.

Peter Sziklai
Conference Chair
Tampere International Center for Signal Processing (TICSP) has been regularly organizing focused international workshops on advanced and emerging topics of modern signal processing. TICSP organized a series of international Workshops on Spectral Methods and Multirate Signal Processing held in Moscow, Russia (2007), Florence, Italy (2006), Riga, Latvia (2005), Vienna, Austria (2004), Barcelona, Spain (2003), Toulouse, France (2002), and Pula, Croatia (2001). These workshops came as a follow up of International Workshops on Transforms and Filter Banks, first arranged in Tampere, Finland in 1998, and second time in Brandenburg, Germany in 1999.

All these workshops have brought together leading experts in diverse areas such as spectral and transform methods, filterbanks, and multirate signal processing in a stimulating and relaxed atmosphere to discuss the most important issues in these fields. The workshops have given an opportunity to examine the deep interconnections between transforms, filter banks, and other signal representations as well as to recognize new and emerging fields of research. Recently, local and non-local approximations have emerged as surprisingly powerful tools for image analysis, restoration, compression, and enhancement. The current state-of-the-art in image processing exhibits many diverse techniques, which are seemingly different but actually are intimately related through concepts such as sparsity, redundancy, compressibility, and self-similarity.

With the intention to follow and document these latest advances, this year, TICSP organized the first International Workshop on Local and Non-Local Approximation in Image Processing (LNLA), held in Lausanne, Switzerland August 23-24, 2008. The LNLA workshop had four keynote presentations and 24 contributed papers, reflecting the current state-of-the-art in local and non-local image processing. The workshop featured four oral sessions and many informal and fruitful discussions held during the organized lunches, breaks and reception. The program of the workshop can be found on http://sp.cs.tut.fi/ticsp/lnla08/program.shtml

The organizers wish to thank the sponsors, IEEE SP & CAS Chapter of Finland, the European Association for Signal Processing (EURASIP), and Tampere International Center for Signal Processing, for their support, and especially thank the authors for their high quality contributions.

The next LNLA workshop will be at Gustavelund (near Helsinki), 19–21 August 2009. For updates, check the workshops web page http://sp.cs.tut.fi/ticsp/lnla09/.
Special Issue on
Atypical Speech

CALL FOR PAPERS

Research in speech processing (e.g., speech coding, speech enhancement, speech recognition, speaker recognition, etc.) tends to concentrate on speech samples collected from normal adult talkers. Focusing only on these “typical speakers” limits the practical applications of automatic speech processing significantly. For instance, a spoken dialogue system should be able to understand any user, even if he or she is under stress or belongs to the elderly population. While there is some research effort in language and gender issues, there remains a critical need for exploring issues related to “atypical speech”. We broadly define atypical speech as speech from speakers with disabilities, children’s speech, speech from the elderly, speech with emotional content, speech in a musical context, and speech recorded through unique, nontraditional transducers. The focus of the issue is on voice quality issues rather than unusual talking styles.

In this call for papers, we aim to concentrate on issues related to processing of atypical speech, issues that are commonly ignored by the mainstream speech processing research. In particular, we solicit original, previously unpublished research on:

- Identification of vocal effort, stress, and emotion in speech
- Identification and classification of speech and voice disorders
- Effects of ill health on speech
- Enhancement of disordered speech
- Processing of children’s speech
- Processing of speech from elderly speakers
- Song and singer identification
- Whispered, screamed, and masked speech
- Novel transduction mechanisms for speech processing
- Computer-based diagnostic and training systems for speech dysfunctions
- Practical applications

Authors should follow the EURASIP Journal on Audio, Speech, and Music Processing manuscript format described at the journal site http://www.hindawi.com/journals/asmp/. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at http://mts.hindawi.com/, according to the following timetable:
Manuscript Due: April 1, 2009
First Round of Reviews: July 1, 2009
Publication Date: October 1, 2009

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**Vijay Parsa,** National Centre for Audiology, The University of Western Ontario, London, ON, Canada N6G 1H1; parsa@nca.uwo.ca
Special Issue on
Scalable Audio-Content Analysis

CALL FOR PAPERS
The amount of easily-accessible audio, either in the form of large collections of audio or audio-video recordings or in the form of streaming media, has increased exponentially in recent times. However, this audio is not standardized: much of it is noisy, recordings are frequently not clean, and most of it is not labeled. The audio content covers a large range of categories including sports, music and songs, speech, and natural sounds. There is, therefore, a need for algorithms that allow us make sense of these data, to store, process, categorize, summarize, identify, and retrieve them quickly and accurately.

In this special issue, we invite papers that present novel approaches to problems such as (but not limited to):

- Audio similarity
- Audio categorization
- Audio classification
- Indexing and retrieval
- Semantic tagging
- Audio event detection
- Summarization
- Mining

We are especially interested in work that addresses real-world issues such as:

- Scalable and efficient algorithms
- Audio analysis under noisy and real-world conditions
- Classification with uncertain labeling
- Invariance to recording conditions
- On-line and real-time analysis of audio
- Algorithms for very large audio databases

We encourage theoretical or application-oriented papers that highlight exploitation of such techniques in practical systems/products.

Before submission, authors should carefully read over the journal’s Author Guidelines, which are located at http://www.hindawi.com/journals/asmp/guidelines.html. Authors should follow the EURASIP Journal on Audio, Speech, and Music Processing
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http://www.hindawi.com
Special Issue on
Dynamic Spectrum Access for Wireless Networking

CALL FOR PAPERS
Reforms to the traditional command-and-control communication spectrum licensing policy are being considered worldwide, in several countries. The flexibility offered by the new spectrum policies is expected to enable wireless devices to opportunistically access spectrum in both the licensed and unlicensed bands. Clearly, the success of such an emerging dynamic spectrum access paradigm depends on the related technologies, policies, and standards. This special issue will focus on several key signal processing aspects of dynamic spectrum access wireless networks. Higher layer protocols (e.g., routing, transport control, etc.) will not be covered in this issue. Topics of interest include, but are not limited to:

• Fundamental performance limits
• Spectrum detection, estimation, and prediction
• Spectrum measurement and modeling
• Spectrum etiquettes
• MAC protocols and analysis
• Security issues
• Implementations and testbeds
• Standards with emphasis on the signal processing aspects
• Applications (e.g., public safety, interoperability)
• Impact of signal processing on policies

Authors should follow the EURASIP Journal on Advances in Signal Processing manuscript format described at the journal site http://www.hindawi.com/journals/asp/. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at http://mts.hindawi.com/, according to the following timetable:

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http://www.hindawi.com
Special Issue on

Image Processing and Analysis in Biomechanics

CALL FOR PAPERS

Computational methodologies of signal processing and analysis based on 1D-4D data are commonly used in different applications in society. In particular, image processing and analysis methodologies have enjoyed increased deployment in automated recognition, human-machine interfaces, computer-aided diagnostics, robotics surgery, and biomechanics analysis.

Image processing and analysis is fundamentally a multidisciplinary area, combining elements of informatics, mathematics, statistics, psychology, mechanics and physics, among others. One of the more important applications of image processing and analysis can be found in medical imagery, which continually promotes new research and development. Present trends include using statistical or physical procedures on medical images in order to have different objectives, such as organ segmentation, shape reconstruction, motion and deformation analysis, organ registration and comparison, virtual reality, computer-assisted therapy, or biomechanic analysis and simulation.

The research related with analysis and simulation of biomechanical structures has been a source of many challenging problems, involving geometric modeling, numerical modeling, biomechanics, material models for living tissues, experimental methodologies, and mechanobiology, as well as their application in clinical environments. A critical component for true realistic biomechanical analysis and simulations is to obtain accurately, from images, the geometric data and the behavior of the desired structures. For that, the use of automatic, efficient, and robust techniques of image processing and analysis is required.

The main objective of this Special Issue on Image Processing and Analysis in Biomechanics is to bring together recent advances in the field. Topics of interest include, but are not limited to:

- Signal processing in biomechanical applications
- Data interpolation, registration, acquisition and compression in biomechanics
- Segmentation of objects in images for biomechanical applications
- 3D reconstruction of objects from images for biomechanical applications
- 2D/3D tracking and object analysis in images for biomechanical applications
- 3D vision in biomechanics
- Biomechanical applications involving image processing and analysis algorithms
- Virtual reality in biomechanics
- Software development for image processing and analysis in biomechanics

Before submission authors should carefully read over the journal’s Author Guidelines, which are located at http://www.hindawi.com/journals/asp/guidelines.html. Authors should follow the EURASIP Journal on Advances in Signal Processing manuscript format described at the journal site http://www.hindawi.com/journals/asp/. Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at http://mts.hindawi.com/, according to the following timetable:

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http://www.hindawi.com
Special Issue on

Advances in Signal Processing for Maritime Applications

CALL FOR PAPERS

The maritime domain continues to be important for our society. Significant investments continue to be made to increase our knowledge about what “happens” underwater, whether at or near the sea surface, within the water column, or at the seabed. The latest geophysical, archaeological, and oceanographical surveys deliver more accurate global knowledge at increased resolutions. Surveillance applications allow dynamic systems, such as marine mammal populations, or underwater intruder scenarios, to be accurately characterized. Underwater exploration is fundamentally reliant on the effective processing of sensor signal data. The miniaturization and power efficiency of modern microprocessor technology have facilitated applications using sophisticated and complex algorithms, for example, synthetic aperture sonar, with some algorithms utilizing underwater and satellite communications. The distributed sensing and fusion of data have become technically feasible, and the teaming of multiple autonomous sensor platforms will, in the future, provide enhanced capabilities, for example, multipass classification techniques for objects on the sea bottom. For such multiplatform applications, signal processing will also be required to provide intelligent control procedures.

All maritime applications face the same difficult operating environment: fading channels, rapidly changing environmental conditions, high noise levels at sensors, sparse coverage of the measurement area, limited reliability of communication channels, and the need for robustness and low energy consumption, just to name a few. There are obvious technical similarities in the signal processing that have been applied to different measurement equipment, and this Special Issue aims to help foster cross-fertilization between these different application areas.

This Special Issue solicits submissions from researchers and engineers working on maritime applications and developing or applying advanced signal processing techniques. Topics of interest include, but are not limited to:

- Sonar applications for surveillance and reconnaissance
- Radar applications for measuring physical parameters of the sea surface and surface objects
- Nonacoustic data processing and sensor fusion for improved target tracking and situational awareness
• Underwater imaging for automatic classification
• Signal processing for distributed sensing and networking including underwater communication
• Signal processing to enable autonomy and intelligent control

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The development of complex applications involving signal, image, and control processing is classically divided into three consecutive steps: a theoretical study of the algorithms, a study of the target architecture, and finally the implementation.

Today such sequential design flow is reaching its limits due to:

- The complexity of today’s systems designed with the emerging submicron technologies for integrated circuit manufacturing
- The intense pressure on the design cycle time in order to reach shorter time-to-market, reduce development and production costs
- The strict performance constraints that have to be reached in the end, typically low and/or guaranteed application execution time, integrated circuit area, overall system power dissipation

An alternative approach to a traditional design flow, called algorithm-architecture matching, aims to leverage the design flow by a simultaneous study of both algorithmic and architectural issues, taking into account multiple design constraints, as well as algorithm and architecture optimizations, not only in the beginning but all the way throughout the design process.

Introducing such design methodology is also necessary when facing the new emerging applications such as high-performance, low-power, low-cost mobile communication systems and/or smart sensors-based systems.

This design methodology will have to face also future architectures based on multiple processor cores and dedicated coprocessors to achieve the required efficiency. NoC-based communications will become also mandatory for many applications to enable parallel interconnections and communication throughputs. Adaptive and reconfigurable architectures represent a new computation paradigm whose trend is clearly increasing.

This forms a driving force for the future evolution of embedded system designs methodologies.

This special issue of the EURASIP Journal of Embedded Systems is intended to present innovative methods, tools, design methodologies, and frameworks for algorithm-architecture matching approach in the design flow including system level design and
hardware/software codesign, RTOS, system modeling and rapid prototyping, system synthesis, design verification and performance analysis and estimation. Because in such design methodology the system is seen as a whole, this special issue will also cover the following topics:

- New and emerging architectures: SoC, MPSoC, configurable computing (ASIPs), (dynamically) reconfigurable systems using FPGAs
- Smart sensors: audio and image sensors for high performance and energy efficiency
- Applications: Automotive, medical, multimedia, telecommunications, ambient intelligence, object recognition, cryptography, wearable computing

This special issue is open to all contributions. Authors are invited to submit their papers addressing the domain of design and architectures for signal and image processing. We also strongly encourage authors who presented a paper to the DASIP 2007 workshop to submit an extended version of their original workshop contributions.

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Special Issue on
Enhancing Privacy Protection in Multimedia Systems

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The right to privacy has long been regarded as one of the basic universal human rights. In the last thirty years, advances in computing technologies have brought dramatic improvement in collecting storing and sharing personal information among government agencies and private sectors. The combination of ubiquitous sensors, wireless connectivity, and powerful recognition algorithms make it easier than ever to monitor every aspect of our daily activities. From the use of sophisticated pattern recognition in surveillance video to the theft of biometric signals and personal multimedia contents—people have become increasingly worried about the privacy of their multimedia data. To mitigate public concern about privacy violation, it is imperative to make privacy protection a priority in current and future multimedia systems.

Even though research on privacy enhancing technologies (PETs) began twenty years ago, most of the existing schemes focus on textual or categorical data and are inadequate to protect multimedia. The particular challenges include but are not limited to the difficulty in extracting semantic information for protection, the ability to apply cryptographic primitives to high data-rate multimedia streams, basic signal processing algorithms for protecting privacy without destroying the perceptual quality of the signal, and privacy models for governing and handling privacy rights in multimedia systems. In the last few years, there has been much exciting new theoretical and practical work to tackle these challenges by combining expertise from multimedia, pattern recognition, cryptography, and computer security. This work has the potential of not only providing enhanced level of privacy, but also revolutionizing the research frontier in the fundamental studies of multimedia and security. The goal of this special issue is to collect cutting-edge research work in privacy protection technologies for multimedia, and to provide a high-quality forum for researchers from different areas to explore future opportunities in this area.

We seek submissions from academia and industry presenting novel research and field experiments on topics which include, but are not limited to:

- Privacy in multimedia database systems
- Privacy in multimodal biometric systems
- Privacy in multimodal surveillance systems
Privacy in mobile multimedia systems
Privacy preserving digital right management systems
Privacy preserving feature extraction
Privacy preserving pattern recognition
Privacy threat and attack models
Signal-based obfuscation
Reversibility in signal-based obfuscation
Signal processing in encrypted domains
Subject identification for privacy protection
Location and tracking privacy in multimedia signals
Multimedia sensor protocols that preserve anonymity/privacy
Application of multimedia scrambling and data hiding for privacy protection
Usability issues in privacy-protected multimedia systems
Legality and economics of privacy in multimedia systems

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Special Issue on

Video-Based Modeling, Analysis, and Recognition of Human Motion

CALL FOR PAPERS

The increasing deployment of video camera networks, spurred by the emergence of increased surveillance needs for security purposes, has necessitated the development of new and more efficient technologies for the automatic modeling, analysis, and recognition of human motion in video sequences. Moreover, different other applications like computer graphics, video databases, video communications, and medicine can benefit from a better understanding of human motion.

The development of new technologies for human motion analysis involves a variety of challenging research problems. In gait-based recognition, it has become apparent that efficient technologies can be developed by constructing complicated gait models that include more detailed information about walking individuals. In activity recognition, the definition, description, and recognition of different kinds of human motion stand as an essential research challenge towards the development of smart surveillance systems that will be able to conduct reliable monitoring without any user intervention. To this end, combined tracking and human motion understanding are topics of particular interest. Issues related to the mathematical modeling of human movements also require further investigation. In a recognition framework, scalability issues, that is, issues relevant the impact in the efficiency of a system due to the registration of increased numbers of subjects or activities in the reference database are of great importance.

This special issue aims to focus on emerging technologies related to the above problems and comprehensively cover their system, processing and application aspects.

Topics of interest include, but are not limited to, the following:

- Human recognition based on gait
- 2D and 3D human gait modeling
- 2D and 3D human motion modeling
- Feature extraction for human gait modeling
- Mathematical models of human motion
- Recognition of human actions
- Combined tracking and action recognition
- Indexing and retrieval of human activity databases
- Scalability issues in human motion recognition
- Recognition of complex human motion observed from a single camera or a camera network
- Applications in communications, graphics, medicine and multimedia

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Digital imaging and 3D modeling are nowadays extensively employed to capture, conserve, describe, and render cultural artifacts such as buildings and monuments, archaeological sites, artworks, manuscripts, books, and other objects of artistic, historical or archaeological interest. Computer vision, graphics, image and signal processing are essential instruments for virtual and physical restoration, analysis, and documentation of the artifact content. The ultimate goal is to facilitate the access and study of our cultural heritage by the public and scholars alike and to ensure its preservation for the future. Visual processing of cultural heritage data does not merely exploit and apply standard techniques, but often entails original research specific to this domain.

The creation of digital libraries, delivering to the users’ content that fits their needs, requires the development of powerful indexing and retrieval tools and creates a need for protection against improper usage and preservation of integrity and authenticity. The often low quality and high complexity of the content requires multimodal acquisition to enrich documentation, recover masked information, and facilitate analysis. This special issue aims to address these challenging issues. High-quality, original contributions on the following (non exhaustive) list of topics are solicited:

- High resolution 2D and 3D digital representations, correction of degradations and quality evaluation
- Multimodal, multiresolution, and HDR imaging; data registration and fusion
- Signal, image processing, and 3D modeling to assist physical restoration
- Extraction, recognition, classification, and enhancement of features, structures, and contents
- Digital restoration of damaged artworks (films, photographs, paintings, frescos, manuscripts, etc.)
- Storage, handling, transmission, processing, and visualization of large datasets
- Visualization of archaeological sites: temporal evolution, uncertainty in the model, GIS layers
- Large-scale multimedia databases of artworks; archival, indexing, and retrieval; copyright and IPR management
• Automatic artist/creator or artistic style recognition, detection of forgery/fakes, and
dating of artwork
• User-centered visual applications for museums, digital art repositories, and edutainment (VR, AR, etc.)

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Special Issue on
3GPP LTE and LTE Advanced

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A new cellular standard, termed long-term evolution (LTE) and also referred to as Evolved UMTS Terrestrial Radio Access (E-UTRA), is currently being defined to replace the UMTS third-generation system. LTE advanced, in turn, refers to the most advanced version of LTE that was initiated a few months ago.

LTE represents a radical new step forward for the wireless industry, targeting order-of-magnitude increases in bit rates with respect to its predecessors by means of wider bandwidths and improved spectral efficiency. Beyond the improvement in bit rates, LTE aims to provide a highly efficient, low-latency, packet-optimized radio access technology offering enhanced spectrum flexibility.

The LTE design presents radical differences at every layer. Like many other communication technologies (e.g., digital video and audio broadcasting, DSL, wireless LANs), the physical layer uses OFDM waveforms. In terms of radio access, CDMA has given way to time and frequency multiple access. From the onset, MIMO is an integral ingredient in both its single-user and multiuser variants. At the network layer, a flatter architecture is being defined that represents the transition from the existing UTRA network, which combines circuit- and packet-switching, to an all-IP system.

The objective of this special issue is to disseminate new advances in both the physical and medium access control layers that are applicable to the LTE and LTE advanced technologies.

Suitable topics include, but are not limited to:

- Downlink and uplink physical layer design (frame structure, pilots, resource allocation, control channel design)
- Downlink and uplink radio access
- Downlink and uplink MIMO (single-user and multiuser MIMO, network/cooperative MIMO, very large antenna array MIMO systems, diversity, spatial multiplexing, beamforming and precoding, feedback, virtual MIMO, channel modeling)
- Hybrid ARQ, channel coding, and link adaptation
- Interference mitigation and fractional frequency reuse
- Scheduling and radio resource management
• Multimedia broadcast service (broadcast operation and modes, MBMS, single-frequency network operation)
• Handover and mobility (interfrequency handover within LTE, intersystem handover between LTE, and other radio access technologies)
• Cross-layer optimization techniques
• Relays and multihop transmission schemes

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Special Issue on

Enabling Wireless Technologies for Green Pervasive Computing

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Wireless pervasive computing is a rapidly growing area that has attracted significant attention in recent years due to its tremendous potential impact on the quality of life and the environment. To enable green pervasive computing, it is necessary to integrate technologies, many of which are highly heterogeneous, from various fields including distributed computing, networking, communications, and signal processing. Pervasive technologies can be used in various ways to develop and enhance design models for environment sustainability. Pervasive computing is a power tool used in businesses and social contexts to develop computing devices and solutions which are more environment friendly. This Special Issue focuses on enabling wireless technologies that have the potential to make green pervasive computing truly ubiquitous.

Many enabling wireless technologies continue to be deployed in various pervasive computing environments. There is an increasing interest in the computing community on how these technologies can be responsibly used environmentally to provide ubiquitous information access. The main aim of this special issue is to present the latest research achievements and results in the area of green pervasive computing and, in particular, how next generation wireless systems can help support and promote a sustainable environment. Topics include (but are not limited to):

- Cross-layer design issues
- Green pervasive computing
- Wearable devices and technologies
- Sensor devices, designs, protocols, and applications for green pervasive computing
- RFID applications, designs, standards, and data management
- Wireless technologies and architectures in pervasive computing
- Wireless smart vehicle systems and networking
- Pervasive e-services
- QoS support in wireless systems for green pervasive computing
- Smart vehicular networks and systems for green pervasive computing
- Cellular technologies (UMTS, GSM, GPRS, etc.) for green pervasive computing
Fault-tolerant and resilient networks
Performance evaluation of wireless systems, and technologies

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Aims and Scope
Advances in Multimedia is aimed at presenting comprehensive coverage of the field of multimedia. The journal covers research and developments in multimedia technology and applications, including compression, storage, networking, communication, retrieval, algorithms, architectures, software design, circuits, multimedia signal processing, and multimodality devices and systems. Types of multimedia signals involved include audio, speech, video, image, graphics, geophysical, musical, sonar, radar, and medical signals.

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International Editorial Board
The journal has a distinguished Editorial Board with extensive academic qualifications, which ensures that the journal maintains high scientific standards and has broad international coverage.
Aims and Scope

Computational Intelligence and Neuroscience is a forum for the publication of research in the interdisciplinary field of neural computing, neural engineering, and artificial intelligence, where neuroscientists, cognitive scientists, engineers, psychologists, physicists, computer scientists, and artificial intelligence investigators among others can publish their work in one periodical that bridges the gap between neuroscience, artificial intelligence, and engineering. The journal provides research and review papers at an interdisciplinary level, with the field of intelligent systems for computational neuroscience as its focus.

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Aims and Scope
The overall aim of the International Journal of Antennas and Propagation is to explore emerging concepts and applications in antennas and propagation. The journal focuses on the physical link from antenna to antenna including antenna hardware and associated electronics, the nature and impact of propagation channels and measurement, prediction, and simulation methods for evaluating or designing antennas or the channel. The journal is directed at both practicing engineers and academic researchers and will highlight new ideas and challenges in antennas and propagation for both application development and basic research.

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International Editorial Board
The journal has a distinguished Editorial Board with extensive academic qualifications, which ensures that the journal maintains high scientific standards and has broad international coverage.
Aims and Scope
The overall goal of the International Journal of Biomedical Imaging is to promote the research and development of biomedical imaging by publishing high-quality research articles and reviews in this rapidly growing, interdisciplinary field. Generally speaking, the scope of the journal covers data acquisition, image reconstruction, and image analysis, involving theories, methods, systems, and applications.

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International Editorial Board
The journal has a distinguished Editorial Board with extensive academic qualifications, which ensures that the journal maintains high scientific standards and has broad international coverage.
Aims and Scope
International Journal of Digital Multimedia Broadcasting aims to provide a high-quality and timely forum for engineers, researchers, and educators whose interests are in digital multimedia broadcasting to learn recent developments, to share related challenges, to compare multistandards, and further to design new and improved systems.

Subject areas include (but are not limited to):
- Multimedia broadcasting overall system and standardization, multimedia signal compression, and coding for broadcasting
- Multimedia streaming and control, IPTV with broadcasting, multimedia content services, and digital rights management over broadcasting
- Modulation and demodulation
- Channel estimation and equalization
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The journal has a distinguished Editorial Board with extensive academic qualifications, which ensures that the journal maintains high scientific standards and has broad international coverage.
Aims and Scope
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