

TECHNICAL PROGRAM CHAIRS' OVERVIEW

Welcome to the 2012 IEEE International Conference on Image Processing (ICIP), the 19th in the series of ICIPs. We hope you find ICIP inspiring and rewarding both for the knowledge you gain of advances in Image and Video processing through the conference technical presentations, and for the equally valuable “side information” that comes from personal interactions and hallway conversations with colleagues and friends, old and new, that you meet here.

This year ICIP received over 2000 manuscript submissions from authors spread across the globe. The final technical program for the conference consists of 28 lecture and 48 poster sessions constituted from 786 papers that made it through a rigorous review process. This corresponds to an acceptance rate of just under 38.6%. The accepted lecture and poster papers were subject to identical selection procedures and criteria. Scheduling of papers in lecture vs. poster sessions was done based on coherence and session size constraints with no regard to the review ratings. The reviews and decisions for the ICIP submissions were coordinated by the ICIP Technical Program Committee (TPC), consisting of 56 internationally recognized experts in image and video processing. The TPC decisions were finalized based on a total of 7540 reviews, an average of 3.7 reviews per submitted manuscript, provided by 1171 reviewers. Our sincere thanks to all the TPC members and the reviewers. The ICIP technical program reflects your hard work and dedication, and we believe, allows this year's ICIP to continue and further cement the reputation of ICIP as the premier conference in the image and video processing. This year, we introduced several new features in the review process. Authors were provided an opportunity, and actively encouraged, to provide comments on the reviews for their manuscripts. Both authors and the TPC members also provided assessments for reviews, which were communicated back to reviewers along with final decisions on the reviewed manuscripts. We hope this improved communication will foster a greater sense of belonging and ownership within the ICIP technical community and, if continued, assist with further improving the quality of the ICIP technical program. Our special thanks to the TPC members and authors who participated in these new initiatives.

ICIP 2012 features three plenary talks that highlight how both entertainment and science are being advanced by recent developments in image processing:

- “Advancing Stereoscopic 3D and Beyond: Potential for Media and Entertainment,” by Dr. Markus Gross, Director Disney Research Zurich, Switzerland
- “Reverse engineering the human visual system,” by Prof. Jack Gallant, University of California at Berkeley, USA
- “Revealing the Distant Universe with Space Observatories,” by Dr. Henry C. Ferguson, Space Telescope Science Institute, USA

Prof. Dan Schonfeld, the ICIP 2012 Plenary Chair, coordinated the selection of these talks based on inputs from the ICIP organizing committee that proposed a set of speaker and topic options which were then evaluated based on ICIP audience interest, timeliness, diversity of representation of ICIP subfields. We hope you will find these plenary talks invigorating and energizing.

Eight tutorials start off this year's ICIP Technical program on September 30th:

- “Advanced 3D Video Processing and Coding,” by Aljosa Smolic
- “Teaching Image Processing with Geometry,” by Vivek K Goyal and Jelena Kovacevic
- “Standardization Trends in Visual Quality Assessment,” by Arthur Webster, Philip Corriveau, Vittorio Baroncini, and Margaret Pinson
- “Visual Processing For Social Media,” by Andrew Gallagher and Tsuhan Chen

- “Developments and Trends in 2D and 3D Video Coding Standardization: HEVC and more,” by Jens-Rainer Ohm, Gary Sullivan, and Thomas Wiegand
- “Graph-Based Methods in Image Processing,” by Patrick Wolfe
- “Sparsity Based Reconstruction/Compressive Sensing in Medical Imaging,” by Michael Lustig, Guanghong Chen, and Joshua D Trzasko
- “Time-of-Flight Depth Image Enhancement,” by Seungkyu Lee, Hyunjung Shim, and Ouk Choi

The tutorials provide attendees a perfect way to get up to speed on the state of the art in the various areas that they feature. These tutorials were selected from 16 proposals submitted in response to the Call For Proposals after careful review by a panel of image and video processing experts coordinated by the Tutorial Chairs, Prof. Lina Karam and Prof. Andreas Savakis.

The ICIP 2012 program features three special sessions that highlight emerging areas in image processing:

- “Depth camera image processing and applications”, organized by Seungkyu Lee
- “People re-identification and tracking from multiple cameras”, organized by Tiziana D’Orazio and Grazia Cicirelli
- “Recent advances in cryptography and image processing”, organized by Inald Lagendijk, William Purech and Zekeriya Erkin

These special sessions are selected from 9 proposals received in response to the Call for Special

Sessions after a careful review under the supervision of the Special Sessions Chair, Prof. David Taubman. Papers in the special sessions were subject to the same rigorous review process as the regular ICIP program and received an average of 3.2 reviews per paper.

In order to recognize research excellence, ICIP 2012 will feature a number of paper awards to be selected and awarded at the conference. Nominations were based on reviewer’s scores and comments and recommendations from TPC members coordinating the review process. Nominated papers were evaluated by an independent panel coordinated by the Awards Chair, Dr. John Apostolopoulos. Please look forward to announcement of the ICIP paper awards during the ICIP opening session on Tuesday October 2nd. We would like to thank the following companies (in alphabetical order), for their generous support of the ICIP 2012 awards: Google, Hewlett-Packard, Microsoft, and Mitsubishi Electric Research Laboratory (MERL).

We would like to thank the plenary speakers, tutorial presenters, reviewers, session chairs, and all authors and presenters for their contributions to the ICIP 2012 Technical Program. A special thank you to the TPC members who, in their role as coordinators for the review process, are instrumental in making feasible the ICIP Technical Program. Finally we would like to convey our appreciation to Conference Management Services for the infrastructure they provided for the ICIP 2012 Technical Program, in particular, Lance Cotton, for his responsiveness to all our requests for updates and new features.

Welcome to ICIP 2012!

Gaurav Sharma and Sheila Hemami
ICIP 2012 Technical Program Chairs