

S3P-2016

IEEE-EURASIP SUMMER SCHOOL ON SIGNAL PROCESSING SEMANTICS IN MEDIA



CAVALESE (TN), ITALY – SEPT. 4-10, 2016

S3P - 2016 FINAL REPORT

(DRAFT)

AIMS AND SCOPE

The 2016 IEEE-EURASIP Summer School on Signal Processing (S3P-2016) was the 4th edition of a successful series. Organized by the IEEE SPS Italy Chapter and the National Telecommunications and Information Technologies Group - GTTI with the sponsorship of IEEE (S3P program) and EURASIP (Seasonal School Co-Sponsorship agreement) - the School became a unique forum where International experts in Signal Processing provided PhD students and Researchers with insights on up to date tools and methodologies in the field.

The proposed theme of the 2016 edition was **Semantics in Media**.

The school reported recent advances in multimedia technologies, exploring the boundary between signal processing and signal understanding. More in detail, a selection of hot research topics has been offered, including:

- **Signals vs. context:** content, context and intent in media analysis and retrieval
- **Signals vs. smart systems:** intelligent video processing systems
- **Signals vs. perception:** quality of experience in media
- **Signals vs. knowledge:** human computing and crowdsourcing in media analysis
- **Signals vs. representation:** better signal descriptions for better content understanding
- **Signals vs. security and trust:** multimedia forensics

The school counted on the presence of **outstanding lecturers** of international level:

- **Andrea Cavallaro** (*Queen Mary Univ. of London, UK*)
- **Alan Hanjalic** (*TU Delft, Netherlands*)
- **Alejandro Jaimes** (*Univ. Columbia and AiCure, USA*)
- **Aggelos K. Katsaggelos** (*Northwestern Univ., USA*)
- **Patrick Le Callet** (*Polytech' Nantes, France*)
- **Fernando Pérez-González** (*Univ. Vigo, Spain*)
- **Vittorino Filippas** (*Free Lance Advisor, Italy*)
- **Roberto Saracco** (*EIT-Digital and IEEE FDC Chair, Italy*)

The technical program spanned 5 days, (Mon. 5 to Fri. 9, with arrival on Sun. 4), along which the school provided both theoretical insights and application examples. Additionally, the school gave the students opportunities to present, cross-link and interact each other and with teachers about their current and future research, as well as to attend some special events with industry and innovation experts. Students have been also engaged in demo competition with a final award. Moreover, a test has been performed during last day to obtain a certificate worth ECTS credits.

PROGRAM

The program covered **5 full days** (Mon. 5 to Fri. 9, with arrival on Sun. 4). Every day included presentations by **selected invited lecturers**, plus additional activities directly involving the students (**poster presentations, demo sessions, networking sessions**). In the afternoon of the last day, students have been challenged on a **final exam session** where they had the possibility to test their level of understanding of the proposed material. A certificate has been issued worth **ECTS** credits.

Also, two **special sessions** have been organized on broad-interest themes such as innovation and entrepreneurship in ICT, involving industrial and business experts.

Program

	Sun 4	Mon 5	Tue 6	Wed 7	Thu 8	Fri 9
08.00-09.00		breakfast	breakfast	breakfast	breakfast	breakfast
09.00-10.30		lecture 1 part a	lecture 3 part a	lecture 4 part a	lecture 5 part a	lecture 6 part a
10.30-11.00		coffee break	coffee break	coffee break	coffee break	coffee break
11.00-12.30		lecture 1 part b	lecture 3 part b	lecture 4 part b	lecture 5 part b	lecture 6 part b
12.30-14.00		lunch	lunch	lunch	lunch	lunch
14.00-15.30	arrival and registration	lecture 2 part a	"A glance into the future of ICT"	Social event & Student research award	Special session "How to sell your research"	final exam
15.30-16.00		coffee break	coffee break		coffee break	
16.00-17.30		lecture 2 part b	Show&tell session		meet with experts	meet with experts
17.30-18.30		meet with experts				
20.00	dinner	dinner	dinner		dinner	dinner

LECTURE
INTERACTIVE SESSION
SPECIAL SESSION
lunches and breaks
other

Lecturers and Lectures Titles

- Lecture 1: Camera coalitions
 - *Andrea Cavallaro (Queen Mary Univ. of London, UK)*
- Lecture 2: Grissom in awe: the CSI effect and media forensics
 - *Fernando Pérez-González (Univ. Vigo, Spain)*
- Lecture 3: Better signal descriptions for better content understanding
 - *Aggelos K. Katsaggelos (Northwestern Univ., USA)*
- Thematic session: A glance into the future of ICT
 - *Roberto Saracco (EIT-Digital and IEEE FDC Chair, Italy)*
- Lecture 4: Multimedia Search: From Relevance to Utility
 - *Alan Hanjalic (TU Delft, Netherlands)*
- Lecture 5: Perception and quality of experience in media
 - *Patrick Le Callet (Polytech' Nantes, France)*
- Thematic session: How to sell your research
 - *Vittorino Filippas (Free Lance Advisor, Italy)*
- Lecture 6: Insights from Big Data: Interaction, Design, and Innovation
 - *Alejandro Jaimes (Univ. Columbia and Acesio, USA)*

COMMITTEE

The school has been held under the framework of the IEEE SPS Italy Chapter. The organization of the school has been handled by the University of Trento.

School Organizers:

- Francesco G.B. De Natale, University of Trento, Italy
- Giulia Boato, University of Trento, Italy

School Steering Committee

- Mauro Barni, Università di Siena
- Riccardo Leonardi, Università di Brescia
- Enrico Magli, Politecnico di Torino
- Carlo Regazzoni, Università di Genova

With the support of

- IEEE Signal Processing Society
- European Association for Signal Processing
- GTTI: Italian Group for Telecommunications and Information Technology
- University of Trento

PARTICIPANTS INFORMATION

We had in total 27 attendees, all students, coming from Europe. Among them 4 registrations have been covered by IEEE grants and 3 were people involved as support for our internal organizing committee.

Regarding EURASIP membership, 5 students out of 27 were already members. In the following please find the list of the participants to enroll as EURASIP members as agreed:

Students List to be enrolled as EURASIP members

ABRAMOVA	SVETLANA
ALLEGRA	DARIO
ALSHAYA	OMAR
ANTIN	MILANA
ARICI	GIORGIO
BONDI	LUCA
BONOMI	MATTIA
CARDELLICCHIO	ANGELO
COSTANTIN	MIHAI-GABRIEL
D'AMIANO	LUCA
IRFAN	MUHAMMAD
KORDOPATIS	GIORGOS
LING	SUIYI
MALACARNE	ALAIN
MILOTTA	FILIPPO
MORALES FIGUEROA	AMPARITO
	ALEXANDRA
MURGIA	FRANCESCA
ORTIS	ALESSANDRO
PHAN	QUOC TIN
POSPISIL	JACKUB
PURI	SAURABH
SIAHAAN	ERNESTASIA

Picture of participants



PARTICIPANT FEEDBACK QUESTIONNAIRE RESULTS

We proposed to the student a questionnaire about their satisfaction respect to the school experience. Herewith we provide a synthetic summary of their opinion:

1. Overall, how satisfied were you with this summer school?

- 81% Very satisfied
- 19% Moderated satisfied

2. Would you be interested in attending a follow-up summer school next year on a related topic?

- 88% Yes
- 11% No
- 1% No answer

3. Please describe what you liked about this summer school

Most of the students liked the presence of outstanding experts in the field of Signal Processing in an nice international and collaborative atmosphere. Lecturers were present during the entire school and have been asked to be available for discussion also outside the lessons. During the school we organized two technical sessions related to general issues in ICT that have been appreciated. The poster session gave the opportunity to all students to present their own work to the other participants, thus enabling further discussion among them and with the advise of lecturers. The

organization of the school, the venue with different services available, the social event and the location in the mountains have been greatly appreciated.

4. Please describe what you think can be improved.

Some participants asked to have more time for lecturers to present their lesson or to reduce the number of slides for each talk.

The final exam could be changed into a weekly assignment or hackathon, thus enabling more interaction among students.

5. Please use this space to provide any additional comments.

The poster session could be organized so that each student can have the possibility to see other posters, giving more time or spreading it along all week.

FORECAST OF FINANCIAL PERFORMANCE

In the following please find our forecast of financial performance, that is not definitive since we need to have the final costs from some suppliers.

number of students	27
<i>(23 paying, 4 grants)</i>	
COSTS	Euro
Venue	16557
<i>Lodging (27 students + 8 lecturers + 2 organizing team)</i>	15478
<i>Meeting rooms</i>	492
<i>Services (coffee breaks, social event)</i>	587
Lecturers' travel expenses	4100
Award	405
School kit (materials and consumable)	1.925
Support personnel	5425
Travels (organizers)	700
TOTAL EXPENSES	29.112
INCOMES	
Student fees	18300
IEEE contribution	4487
Expected Eurasip contribution	4340
DISI cofund	2000
TOTAL INCOMES	29127
BALANCE	15