

and applications. Since it was established in 1979 by the European Workshop on Industrial Computer Systems, Technical Committee 7 on Reliability, Safety and Security (EWICS TC7), SAFECOMP has contributed to the progress of the state-of-the-art in dependable application of computers in safety-related and safety-critical systems.

SAFECOMP 2014 was the 33rd International Conference on Computer Safety, Reliability and Security, and took place in Florence, Italy, from Sept. 8-12, 2014.

SAFECOMP covers state-of-the-art, experience and new trends in the areas of safety, security and reliability of critical computer applications. SAFECOMP provides ample opportunity to exchange insights and experience on emerging methods, approaches and practical solutions.

#### ERCIM/ARTEMIS/EUROMICRO Special Session TET-DEC

A joint Special Session TET-DEC “Teaching, Education and Training for Dependable Embedded and Cyber-physical Systems” was held at the Euromicro Conference on Digital System Design (DSD) and Software Engineering and Advanced Applications (SEAA) 2014 in Verona, Italy, 27-29 August 2014. It was jointly organized by the ERCIM DES WG, Euromicro and the ARTEMIS Education & Training Working Group.

In the field of Cyber-physical Systems and Systems of Systems, there is tremendous investment in research and innovation. Gaps still exist, however, in education and training in this area. After a first successful start of this session in 2013, we asked again this year: “How should we educate and train our current and future engineers and researchers? This special workshop show-cased the current work in this area, facilitating fruitful discussions and exchanges of ideas, presenting best practices and experience reports, and analysis of the challenges with recommendations for a sustainable future.

The workshop of the ERCIM DES WG was supported by the ARTEMIS E&T (Education & Training) Working Group, ARTEMIS projects, in particular SafeCer (“Safety Certification of Software-Intensive Systems with Reusable Components”), as well as MBAT (Combined Model-based Analysis and Testing of Embedded Systems) and R3-COP (Resilient Reasoning Robotic Co-operating Systems).

The TET-DEC workshop was part of the regular session of the conference and the papers are in the IEEE conference proceedings. The special session included five presentations. It also provided an overview on support for education and training activities in European and national research projects in the area of embedded systems:

- Erwin Schoitsch, Introduction: Teaching, Education and Training viewed from European projects’ perspectives.
- Miren Illarramendi Rezabal, Leire Etxeberria Elorza and Xabier Elkorobarrutia Letona. Reuse in Safety Critical Systems: Educational Use Case First Experiences.
- Jakob Axelsson, Avenir Kobetski, Ze Ni, Shuzhou Zhang and Eilert Johansson. MOPED: A Mobile Open Platform for Experimental Design of Cyber-Physical Systems (one of three papers to receive the “Best Paper Award” of the conference)

- Elena Gomez-Martinez and Alvaro Fernandez-Diaz. Introducing Embedded Systems to People with Special Needs: Insights from a Real Case
- Clara Benac Earle, Lars-Ake Fredlund, Julio Marino and Thomas Arts. Teaching students Property-based Testing.

#### Links:

SAFECOMP 2014: <http://www.safecomp2014.unifi.it/>  
 SAFECOMP 2014 Workshop proceedings: <http://link.springer.com/book/10.1007/978-3-319-10557-4>  
 Euromicro: <http://www.euromicro.org>  
 ARTEMIS projects: <http://www.artemis-ia.eu/all-projects.html>

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## MUSCLE Working Group International Workshop on Computational Intelligence for Multimedia Understanding

by Maria Trocan, Emanuele Salerno and Enis Cetin

*The Institut Supérieur d'Electronique de Paris (ISEP) hosted the International Workshop on Computational Intelligence for Multimedia Understanding (IWCIM 2014), organized by the ERCIM Working Group on Multimedia Understanding through Semantics, Computation and Learning (Muscle), 1-2 November 2014.*

Multimedia understanding is an important part of many intelligent applications in our social life, be it in our households, or in commercial, industrial, service, and scientific environments. Analyzing raw data to provide them with semantics is essential to exploit their full potential and help us in managing our everyday tasks. The purpose of the workshop was to provide an international forum to present and discuss current trends and future directions in computational intelligence for multimedia understanding. The workshop also aimed at fostering the creation of a permanent network of scientists and practitioners for easy and immediate access to people, data and ideas. This is now the third such workshop organized by MUSCLE. As in the past, the participation was open to all interested researchers. This year, the papers presented, as well as the audience, were particularly numerous, thus strengthening the networking capabilities of the group with some more research teams requesting to join MUSCLE.

34 participants from eleven countries attended the workshop. The papers accepted for presentation and publication in IEEE Xplore were 27. The presentations were divided into three additional thematic sessions, with respect to traditional tracks: Big and linked data, Hyperspectral image processing,

and Retinal image processing and analysis. The talks covered a very wide range of subjects. A motive for satisfaction was the presence of several papers dealing with media different from image and video, some of them integrating multiple media to approach understanding. Three authoritative invited speakers presented keynote talks: Prof. Gauthier Lafruit, of Université Libre de Bruxelles (Image-based 3D scene visualization and Free Viewpoint TV), Prof. Michel Crucianu, of the Conservatoire National des Arts et Métiers, Paris (Multimedia Information Retrieval: Beyond Ranking), and Prof. François-Xavier Coudoux, of the Institute of Electronics, Microelectronics, and Nanotechnologies, France (Digital Image and Video Transcoding: Application to Optimized Video Delivery over Error-prone Networks).

The Muscle group has more than 60 members from 23 partner groups in 16 countries. Their expertise ranges from machine learning and artificial intelligence to statistics, signal processing and multimedia database management.

**Links:**

<http://iwcim.isep.fr/index.html>  
<http://wiki.ercim.eu/wg/MUSCLE/>

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## Networking: IFIP TC6 2014 Dagstuhl Meeting

by Harry Rudin

*The International Federation for Information Processing's (IFIP's) Technical Committee 6 (TC6) held its biannual meeting at Schloss Dagstuhl, Germany, on 2- 14 November 2014.*

TC6 concerns itself with Communications Systems. The objective was to start designing a strategic plan for TC6's future activities. To this end several talks were given of general interest, many dealing with communication networking, both in the measurement and international cooperation sense. Much of this information is of wide interest and publicly accessible. This broad interest is the reason for this report. The overall Dagstuhl program is available at <http://www.dagstuhl.de/en/program/calendar/evhp/?semnr=14463>

Vassilis Kostakos from the University of Oulu, Finland presented his panOULU system which uses wireless mobility traces for mobility analysis and traffic planning in Oulu. At <http://ufn.virtues.fi/~swproject12/> one can find current hotspots of activity in Oulu.

Alessandro D'Alconzo from the Telecommunication Research Center in Vienna talked about his mPlane system,

a distributed measurement infrastructure to perform active, passive and hybrid measurements of the dynamics of the Internet (<http://www.ict-mplane.eu/>).

Panayotis Antoniadis from the ETH in Zurich discussed his NetHood Initiative. The project has, among other work, produced a small, inexpensive transceiver for establishing an adhoc network in a small community. The group is looking for suggestions for additional applications of these devices. See [http://nethood.org/first\\_draft.html](http://nethood.org/first_draft.html)

Fabio Ricciato from the Austrian Institute of Technology in Vienna described the TMA (Traffic Monitoring and Analysis) portal. TMA was originally supported by COST11 but now has a life of its own for coordinating network measurements (<http://www.tma-portal.eu/>)

Georg Carle from the Technical University in Munich described the Network of Excellence in Internet Science (EINS). EINS facilitates cooperation among researchers on an international basis (<http://www.internet-science.eu/>)

Filip De Turck, University of Ghent, described the clustering effort in Europe to coordinate ongoing European research on the Internet of Things ([http://cordis.europa.eu/fp7/ict/enet/rfid-iot\\_en.html](http://cordis.europa.eu/fp7/ict/enet/rfid-iot_en.html)).

IFIP digital libraries were also discussed. TC6 now has its own Web site up and working (<http://opendl.ifip-tc6.org>). One possible addition discussed was a TC6 networking journal, published only online and relatively rarely with the feature of extraordinarily strong articles. One thought discussed was reimbursing reviewers so as to obtain equally strong and constructive reviews. Clearly the journal would be open access.

Another discussion was on the quality and ranking of communication conferences. Obviously this is an important issue inside and outside the IFIP community, given today's demand for research publication to strengthen the resume. The purpose of these discussions was to consider various possibilities for IFIP's TC6 to be of greater service to the networking community. Extending our digital library, supporting COST or Network of Excellence projects under an IFIP umbrella, providing conference ranking, and extending our educational reach are all under consideration.

**Links:**

<http://www.dagstuhl.de/en/program/calendar/evhp/?semnr=14463>  
<http://ufn.virtues.fi/~swproject12>  
<http://www.ict-mplane.eu/>  
<http://www.tma-portal.eu/>  
<http://www.internet-science.eu/>  
[http://cordis.europa.eu/fp7/ict/enet/rfid-iot\\_en.html](http://cordis.europa.eu/fp7/ict/enet/rfid-iot_en.html)  
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