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SUMMER SCHOOL

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4th International Research-Centered Summer School in
“Cognitive Systems and Interactive Robotics, Social Media, Digital Preservation”

The Summer School is organized by the Interactive Robots and Media (<http://www.irmlab.com>), the Software & Knowledge Engineering Lab at the Institute of Informatics & Telecommunications of NCSR "Demokritos" (<http://www.iit.demokritos.gr/>) and the ARCOMEM (<http://www.arcomem.eu>) and SOCIALSENSOR (<http://www.socialsensor.eu>) FP7 ICT research projects. This is the fourth summer school in a sequence initiated by the Interactive Robots and Media Lab. This year it will take place between July 4 and July 31 2013, at NCSR "Demokritos", in Athens, Greece.

http://www.iit.demokritos.gr/education/summer_school_2013

The Summer School has an innovative format: it is Research-Centred, with a strong focus on mini-projects of month-long duration, carried out by multiple teams of 3-4 students including a mix of academic levels (Postdoc, PhD, undergraduates). Selected seminars and lectures will also take place; but not exceeding two hours per day. Exciting cultural events and excursions will take place during the weekends. The outcome of the summer school includes both numerous scientific publications, as well as longer-term collaborations.

This year's topic and research project areas, focus on the cognitive systems viewpoint, as pertaining to:

- Human Robot Interaction and Whole-body HCI
- Dialogue Systems and Computer Vision
- Information Visualisation
- Social Media Analysis and Utilization
- Digital preservation and the Social Web
- User Modelling and Recommendation systems
- Affective science and computing
- ICT for sustainable development

The lab is equipped with multiple robots (The Ibn Sina human-size Android with full facial expressions, the Indigo museum guide robot, Pioneer and other mobile robots, manipulator arms, UAVs), as well as advanced vision and other sensing systems.

In terms of computational resources, there is access to high-performance computation, as well as multiple workstations. There is also close contact with numerous world-class institutions and companies in the field, across three continents, and numerous distinguished invited lecturers and supervisors will be joining us for the summer school.

The Social Media and Digital Preservation theme is co-organised by the EU-funded

Integrated Project ARCOMEM. This year, a distinguished group of lecturers, as well as experts from the Media sector and Parliamentary Libraries will be present for the duration of the school that will present the latest scientific findings in the area. A hands-on training session will be available for the students on the applications and technologies of Digital Preservation and the Social Web.

The SocialSensor project also supports the organization of this Summer School and will provide the dimension of real-time multimedia indexing and search in the Social Web. Engineers and researchers from the consortium of the project will explain how to move beyond conventional text-based indexing and retrieval models by mining and aggregating user inputs and content over multiple social networking sites. New tools for Social Indexing will be presented which incorporate information about the structure and activity of the users' social network directly into the multimedia analysis and search process.

Finally, the summer school will cooperate with FONDAZIONE ROSSELLI AMERICAS (FRA) through its ICT4DEVIS (Information & Communication Technology for Development International School), to provide a better understanding on the use of ICT in project planning for sustainable development, specifically focusing on developing countries. FRA's ICT4DEVIS is conceived as a for-credit, hands-on, practice oriented, cross-cultural summer school, intended for students, professionals and practitioners who want to pursue a professional career in deploying ICT as a means for international development. In this Summer School ICT4DEVIS will present "best practices" explaining the "life-cycle" of development projects aiming at improving the living conditions of developing countries, through the deployment of ICT.

The Host Institution

The National Center for Scientific Research (NCSR) "Demokritos" is composed of 700+ distinguished researchers, research support professionals and scientific associates, and with a 50+ year experience of excellence, is arguably the most prestigious Hellenic research Center. NCSR is distinguished for supporting a visionary and dynamic research community that is currently under the process of re-orientating its efforts with emphasis on innovation exploitation and fostering of new businesses and synergetic cooperation with the private sector. It is comprised of five institutes, covering Informatics and Telecommunications, Biosciences and their applications, Nuclear and Radiological Sciences, Materials, Physics (<http://www.demokritos.gr/>)

NCSR Demokritos is furthermore tightly integrated with the European Research ecosystem, with a long tradition of active collaboration and exchange. Its green campus is situated in a beautiful natural environment in Agia Paraskevi, Athens.

The place

Athens is the historical capital of Europe, with a long history, dating from the first settlement in the Neolithic age. In the 5th Century BC (the "Golden Age of Pericles") – the culmination of Athens' long, fascinating history – the city's values and civilization acquired a universal

significance. Over the years, a multitude of conquerors occupied Athens, and erected unique, splendid monuments - a rare historical palimpsest. In 1834, it became the capital of the modern Greek state and in two centuries since it has become an attractive modern metropolis with unrivalled charm, with a huge number of world-class cultural activities.

A large part of the town's historic centre has been converted into a 3-kilometre pedestrian zone (the largest in Europe), leading to the major archaeological sites ("archaeological park"), reconstructing – to a large degree – the ancient landscape. Numerous monuments where Aristotle, Plato, Pericles, and others were once walking still exist today and invite you to enjoy the Hellenic Sun.

Apart from the wonderful coast of Attica where you can swim or enjoy the thriving nightlife, within a couple of hours travel from Athens you can enjoy numerous historical sites, such as the oracle of Delphi or the temple of Sounio, as well as amazing islands such as Santorini, Mykonos, and Crete.

This will be an unforgettable experience, not only of technology and collaboration, but also of some of the best that European nature and culture has to offer!

Applying for the Summer School

We are welcoming applications at multiple levels (final-year B.Sc, M.Sc., PhD, and postdoc levels). Necessary prerequisites include any one, and ideally a mixture of the skills below:

- Programming in C++, Java or Matlab
- Pattern Recognition, Data Mining, Machine Vision, or Natural Language Processing
- Psychological/Interaction experimental design and data analysis
- Information Visualization
- Social Media Analysis
- Sentiment analysis
- Digital Archiving

But most importantly, the creative imagination and the strong motivation to produce innovative results in any of the main theme areas.

Scholarships will be provided to selected participants.

To apply, kindly send your CV, including emails of two referees, to nmav@alum.mit.edu and cc vangelis@iit.demokritos.gr, by 10 May 2013. Applications will be considered in a first come first served basis.

Looking forward to welcoming you in Athens!

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