IX Summer School
"Achievements and Applications of Contemporary Informatics, Mathematics and Physics "
(AACIMP – 2014)

August 1—15, 2014, Kyiv (Ukraine)

http://summerschool.ssa.org.ua

Summer School "Achievements and Applications of Contemporary Informatics, Mathematics and Physics" (AACIMP-2014) is a unique scientific-educational project which is hosted for 9 years by the Student Science Association of the National Technical University of Ukraine "Kyiv Polytechnic Institute". The 9th Summer School will be held on August 1—15, 2014 in Kyiv, Ukraine.

Educational program. The courses are presented in the form of lectures, seminars, workshops, discussions according to the topics of four areas (streams):

- **Operational Research.** This year, participants of the Operational Research (OR) stream will learn how different types of models (both hard and soft techniques) are used to improve decision-making in the face of uncertainty in real problems of business, government, and society. The OR program is interdisciplinary, teaching methods and techniques that are often applicable to a wide variety of scientific fields. Supply chain management, humanitarian and commercial logistics, financial markets modeling, and soft OR methods and approaches will be presented.
- **Applied Computer Science.** This year stream will first cover data retrieval and storage techniques as a part of data manipulation, then will cover basic methods of statistical analysis, data mining and machine learning. Lectures will be given on data visualization and tools for data analysis. This program will also investigate various real-world applications of these techniques, including image processing, bioinformatics, social science, and natural language processing. As this stream focuses on "learning by doing" principle, a number of training exercises applying theoretical knowledge are planned.
- **Neuroscience.** The neuroscience stream will provide insight into a broad range of topics, including dynamical principles of visual and auditory systems, rhythm generation, neuromechanics of movement control, neuron-computer interface in dynamic-clamp experiments, and brain computer interfaces. We will use practical examples of applications of modeling and biosignal analysis for functional assessment of movement control mechanisms and sensory system dynamics. This program aims to provide participants with an essential review of the contemporary computational neuroscience field and to give a practical introduction to the principles of analysis and simulation packages.
- **Energy.** The energy program returns this year, covering on low-energy housing, focusing on new approaches and solutions to enhancing energy efficiency of buildings. This program will give a broad overview of existing challenges, followed by a discussion of widespread and emerging approaches to low energy building. The introductory lectures will be followed by the study of specific technologies, such as "smart buildings", "smart grids" and their components; the efficient usage of solar energy; natural ventilation and integrated energy efficiency equipment; daylight systems, heating, ventilation, and air conditioning; new materials and construction methods; and advanced simulation tools.

Tutors are the scientists from well-known universities of over the world and the leading specialists of world's largest companies. The participants of Summer School have the possibility to find out today what the rest of the world will know only tomorrow.

Social events. AACIMP social program enables you to get acquainted with Ukrainian spirit, to discover national customs, traditions and cuisine, and to spend two weeks in a modern and at the same time ancient city of Kiev! During the guided city tours you will find out some secret places and be impressed with the XVIII-XIX centuries architecture of Kiev city centre. Also, participants are offered to take part in exciting quests, the national evening, river tour and movie night.

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Registration. To participate you have to fill in an application form on the website of AACIMP-2014 (**summerschool.ssa.org.ua**). The decision on your acceptance will be made by the Program Committee within a month from a date of your registration.

Early registration – **until May 15**.

Late registration – **until June 15 (extended)**.

Registration fee. Registration fee includes the cost of educational and social programs, informational materials and souvenirs of Summer School.

The type of fee	Degree and exchange students currently studying at		International students	Professionals under 35
	KPI	Ukrainian universities		
Early fee Until May 15, 2014	100 EUR	180 EUR	350 EUR	500 EUR
Late fee Until June 15, 2014	120 EUR	210 EUR	420 EUR	

Accommodation and Meals. Participants of AACIMP-2014 may additionally order residence and meals for the time of Summer School on special terms suggested by the organizers.

Accommodation fee (dormitory of NTUU "KPI") — **130 EUR**.

Meals fee (only lunch) — **65 EUR**.

Meals fee (3 meals per day) – **140 EUR**.

Contact information

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You can find all the details of registration, information about courses, terms of participation and payment on the AACIMP-2014 website:

http://summerschool.ssa.org.ua