# P R O G R A M

### **AComIn Transfer Technology Seminar on Robotics and Innovations**

# September 18<sup>th</sup>, 2014

14.00 - 16.00 PM

**AComIn Transfer Technology Seminar on Robotics and Innovations** 

14.00 - 15.00 PM

#### Seminar 1: Industrial robotics and modeling of industrial casting proceses Lecture 1: Development of Machining Support Robots

Haptic control methods that improve human force sensing and touch sensing ability have been studied. Machining support robots that enable workers to make high-quality products without making mistakes are developed.

15.00 – 16.00 PM

#### Lecture 2: Modeling and Optimization of Robotized Casting Processes

Optimization algorithms using Computational Fluid Dynamics (CFD) have been developed. Also study is developed on optimization of mold design and product shape as well as optimization of casting process and die casting process.

16.00 – 17.00 PM

Poster Presentations of Bulgarian Scientists and Discussion

Visit of Prof. Ken' Ichi Yano in IICT

to deliver a lecture presenting his results in Optimization, Intelligent Control and Robotics.

# September 19<sup>th</sup>, 2014

9.00 - 10.00 AM

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## **Seminar 2: Medical robots and Life Support Robots**

#### Lecture 1: Development of Robots for Physical Therapy and A New Catheter System

Robots for physical therapy are developed. These robots assist therapeutic exercise for shoulder joint in order to relieve the physical load on physiotherapists. We will continue to contribute to the development of medical technologies. We develop liquid handling technologies in the field of regenerative medicine and new catheter systems to improve the precision of treatment for arteriosclerosis. Furthermore, we develop a support system for human-robot collaborative surgical operation.

## **Lecture 2: Development Life Support Robots**

We develop assistive robots for disabled or elderly persons to improve kinesthetic sense and relaxation. We support activities such as taking meals, sports, playing guitar and drawing.

 $11.00-12.00\;AM$  Poster Presentations of Bulgarian Scientists and Discussion

12.00 AM - 13.00 PM Lunch

14.00 PM Discussion about AComIn Activities