

School of Engineering Sciences

International Autumn School 2013 on "Human-Robot-Interaction" November 18th – 22nd, 2013, Dresden, Germany

Scope & Topics

The Autumn School is one of the projects funded by the German Excellence Initiative as part of the TU Dresden institutional and it is inviting international young researchers and distinguished lecturers for discussing advanced topics in the evolving field of Human-Robot-Interaction, e.g. safe robotics, interactive robotics, cognitive robotics, computer vision, machine learning, artificial intelligence, human-machine-interaction.

Program

Monday Nov 18th morning

Monday Nov 18th afternoon

Tuesday Nov 19th morning

Tuesday Nov 19th afternoon

Wednesday Nov 20th morning

Wednesday Nov 20th afternoon

Sami Haddadin, DLR Institute Robotics and Mechatronics, Oberpfaffenhofen, Germany Introductory Lecture Physical Human-Robot Interaction (safety, mechanical design, interaction control)

Tomas Pajdla, Czech Technical University in Prague, Czech Republic **3D Vision for Robotics and Manipulation**

(camera and robot modeling, 3D measurement by structure from motion, 3D measurement by structured light sensors (Kinect, Xtion), combining a 3D measurement system with a robot)

Justus Piater, Universität Innsbruck, Austria Robot Vision

(topics from object recognition, pose estimation, affordance learning, face tracking, gesture recognition)

Gerhard Lakemeyer, RWTH Aachen, Germany Cognitive Robotics - A Logical Perspective (knowledge representation and reasoning, action languages, robot planning)

Danica Kragic, KTH Stockholm, Sweden Learning Object-Action Interactions (human observation, object affordances, task-based grasping)

Frank Flemisch, RWTH Aachen, Germany Balanced Human Systems Integration for Assistance and Automation (human factors, ergonomics, system ergonomics, human robot cooperation, highly automated systems,

Thursday Nov 21st morning

Thursday Nov 21st afternoon

Wolfram Burgard, Universität Freiburg, Germany **Probabilistic Robotics** (foundations, theory, perception, navigation, mobile manipulation)

assistant systems)

Project Work

Jan Peters, TU Darmstadt, Germany Robot Learning Classes (model learning, imitation learning, reinforcement learning)

Friday Nov 22nd

Contact

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DRESDEN concept Exzellenz aus Wissenschaft und Kultur



School of Engineering Sciences

Applications

Applicants Young researchers: PhD, Postdocs, final year master students (high potentials)

Application documents

- letter of motivation (1 page, A4)
- curriculum vitae with list of publications (in table form)

summerschool.ing@tu-dresden.de Should be sent to

September 15th 2013 Application deadline:

NEW: September 25th 2013

Costs and Logistics

Cost

The Autumn School is one of the projects funded by the German Excellence Initiative as part of the TU Dresden institutional strategy and TU Dresden will offer free of charge participation for the accepted applicants (includes course material, certificate, coffee breaks and some social events).

Grants

A limited number of grants covering free accommodation (Nov 17th - Nov 23rd, double-rooms in shared apartments, incl. breakfast at the TU Dresden International Guest House) and a lumpsum for travel support are available for non TU Dresden applicants. Please indicate in your application whether you wish to

apply for a grant and why it is needed.

Location

The Autumn School will be hosted at the Technische Universität Dresden. The TU Dresden is one of the nine most prestigious, oldest, and largest universities (TU9) focusing on engineering and technology in Germany and has been awarded the excellence status within the German Excellence Initiative. The city of Dresden has been called "Elbflorenz" (Florence of the Elbe), due to a very pleasant location and a mild climate on the Elbe. It offers a Baroque-style architecture and numerous world-renowned museums as well as art collections.

More Information

www.tu-dresden.de/hri-autumn-school

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