

Sondervortrag

Am Montag, dem 23. August 2010, um 16:15 Uhr hält

Prof. Hyungsuck Cho
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einen Vortrag mit dem Titel

A Pathway to Intelligent Perception: Towards Intelligent Imaging And Launching the Robotics Engineering Department at DGIST

Der Vortrag findet im OFFIS F02 statt.

Abstract:

Despite enormous research efforts in imaging related-hardware and software technologies over several decades, capacity, capability and versatility of imaging systems in current use are still limited in its performance due to their inherent problem such as aberration, small field of view, small depth of field, fixed viewing direction and low resolution, etc.

The first part of this talk highlights the research efforts made by OMSMI (Hyungsuck Cho's Lab) in KAIST to alleviate such functional limitations. This research focuses on "one-step ahead" toward intelligent imaging technology making adaptation to changes in imaging environment and condition. Variable view imaging, adaptive zooming, foveated imaging, super-resolution and video image stabilization are discussed in some detail to elucidate the challenge towards intelligent visual perception.

Korea is one of the countries which put its national research resources on robotics to enhance human life quality. To this end the second part of the talk will introduce first the Robotics Engineering Department at Daegu Gyeongbuk Institute of Science and Technology (DGIST) in Daegu, Korea. The department will be specialized in medical robotics field where bio-micro robotics, surgical and rehabilitation robotics and brain-machine interaction are to be focused for its research trust. And finally, the talk will present the current status of medical related-robotics research in Korea which will include research developments by topic along with the research institution.

CV:

Professor Cho is now Chair Professor of Department of Robotics Engineering, Daegu Gyungbuk Institute of Science and Technology (DGIST), and also Professor of Department of Mechanical Engineering, Korea Advanced Institute of Science and Technology (KAIST), Korea since 1978. Since then, he has been actively involved in scholarly and academic activities on international level during his career. He founded the International Journal of Optomechatronics, 2007 (Taylor & Francis Group), now serving as the founding Editor-in- Chief and has served as Associate Editor of a number of other international journals, including IEEE Tr. on Industrial Electronics and IFAC, Control Engineering Practice.

He founded several International Conferences/Workshops including International Symposium on Optomechatronic Technologies (ISOT) in affiliation with SPIE 2000, and has hosted, as General Chair, a number of International Conferences including 17th IFAC World Congress (2008) and IEEE/RAS Intelligent Robots and Systems (1999).

He has served and played a variety of roles in the communities of optomechatronics, control, and robotics. He served as one of the key members for such organizations as Asian Control Association (President; 2008~2010), Intelligent Manufacturing System, International (IMS: Board Member 2003~2010), Intelligent Autonomous Systems Society (Governing Board Member; 2006~2010), now serving ISOT (Steering Committee Member; 2005~) and IEEE/RSJ, IROS (Ad. Com. Member 1999~). His research interest is optomechatronics, robotics and machine vision. He also authored a textbook "Optomechatronics: Fusion of Optical and Mechatronic Engineering, 2005 (Taylor & Francis Group)" and edited several books, book chapters and conference proceedings. He delivered more than 40 plenary talks, invited talks and seminars in over 14 countries in recent years. In 2009, he received "The Order of Science and Technology Merit" (Changjo Medal), the highest medal in science and technology in Korea. He was a Humboldt Research Fellow (1984~) and POSCO Chair Professor (1995~2001).

Eingeladen von: Prof. Dr.-Ing. habil. Sergej Fatikow

Weitere Kolloquiumstermine sind im WWW abrufbar.