ΕΘΝΙΚΟ ΜΕΤΣΟΒΙΟ ΠΟΛΥΤΕΧΝΕΙΟ
ΣΧΟΛΗ ΜΗΧΑΝΟΛΟΓΩΝ ΜΗΧΑΝΙΚΩΝ

ΔΙΑΛΕΞΗ

Sukhan Lee

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με θέμα :

"Progress on Visually-Guided Robotic Service and Manufacturing"

Περίληψη

This talk introduces the research projects currently being carried out in my laboratory, focusing especially on visually guided robotic service and manufacturing. First, a home service robot, "Home-Mate," developed for visually-guided errand service for elderly is presented. In particular, the emphasis is given to how the dependability in errand service is ensured under various ill-conditions based on an adaptive Bayesian recognition framework with a deep Feature Extraction and Reconstruction Network, or, FER-CNN, in short. Second, an autonomous navigation system developed for a long-range lunar rover is presented. Emphasis is given to how to minimize the accumulation of pose error from visual odometry based on an optimal feature selection and a deep global localization under no GPS available. Third, an assembly robot learning assembly tasks based on demonstration is presented, where an assembly robot observes human demonstrating an assembly process and automatically programs itself for the assembly tasks by learning while referencing the assembly specifications available in a factory.

Short Bio: Prof. Sukhan Lee is currently Distinguished Chair Professor and Founding Director of the Intelligent Systems Research Institute at Sungkyunkwan University. He has served as a Vice President of Korea National Academy of Science and Technology from 2016-2019. He served as Dean of the University Graduate Studies from 2011 to 2013, WCU Professor of Interaction Science from 2008 to 2013 and Professor of Information and Communication Engineering from 2003 to 2014. From 1998 to 2003, he was with the Samsung Advanced Institute of Technology as an Executive Vice President and a Chief Research Officer. From 1990 to 1997, he worked for Jet Propulsion Laboratory/NASA, California Institute of Technology, as a Senior Member of Technical Staff. From 1983 to 1997, he was with the Department of Electrical Engineering and Computer Science at the University of Southern California as a Professor. Prof. Sukhan Lee received his Ph.D. degree in Electrical Engineering from Purdue University, West Lafayette, and his M.S. and B.S. degrees in Electrical Engineering from Seoul National University.

Prof. Sukhan Lee is a life fellow of IEEE and a fellow of Korean National Academy of Science and Technology. He served as a Vice President of IEEE Robotics and Automation Society from 2004-2008. He has published over 400 technical papers in Scientific Journals and Major Conferences, over 120 Domestic/International Patents and 6/35 Books/Book Chapters. He has his research interest in robotics, computer vision and artificial intelligence.

Η διάλεξη θα γίνει την **Μ. Δευτέρα 22 Απριλίου 2019, ώρα 12:00**, στην Αίθουσα Τηλεκπαίδευσης, Βιβλιοθήκη, Ισόγειο

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