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E 知能機械情報学特別講義 II (集中講義)
Special Topics in Mechano-Informatics II

東京大学

ソーシャル ICT グローバル・クリエイティブリーダー育成プログラム

Global Design Lecture

Robotics and Animatronics in Disney

Dr. Katsu Yamane

Senior Research Scientist, Disney Research, Pittsburgh

Schedule: July 22nd: 13:00-14:40 (L 233), 14:50-16:30 (L 233)
July 23rd: 10:30-12:10 (L 223), 13:00-14:40 (L 233), 14:50-16:30 (L 233)
July 24th: 10:30-12:10 (L 223), 13:00-14:40 (L 233), 14:50-16:30 (L 233)

Abstract: In this lecture, I will discuss various technical and practical challenges in realizing natural and expressive motions on humanoid and non-humanoid robots. I first present methods for controlling robots with human motion capture data. While human motions seem to be a good starting point for natural motions, it is not straightforward to apply them to robots because of the differences in kinematics and dynamics. I then discuss the practical issues in controlling and modeling humanoid robots such as model identification and sensor calibration. Finally, I introduce our recent efforts in making natural and engaging physical interactions between guests and Audio-Animatronic figures.

Biography: Katsu Yamane received his B.S., M.S., and Ph.D. degrees in mechanical engineering from the University of Tokyo in 1997, 1999, and 2002 respectively. He is currently a Senior Research Scientist at Disney Research, Pittsburgh and an Adjunct Associate Professor at the Robotics Institute, Carnegie Mellon University. Prior to joining Disney, he was an Associate Professor at the Department of Mechano-Informatics, the University of Tokyo. Dr. Yamane received numerous awards including an Early Academic Career Award and a King-Sun Fu Memorial Best Transactions Paper Award from the IEEE Robotics and Automation Society.

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