

Research Seminar

Humanizing Robots

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November 20, 2008, Noon-1:00pm

IT 497 (Informatics)

Abstract

Karl MacDorman's research concerns developing androids (very human-looking robots) as controlled experimental apparatuses and as testbeds for theories about human brains and behavior. His advances in developing more humanlike androids are being used to better understand the cognitive mechanisms underlying social interaction. A human-looking robot is able to elicit the kinds of social responses that only people were able to elicit before. It has the potential to contribute to cognitive science research by serving as an experimental apparatus that can be more precisely controlled than any human actor. This permits the testing of hypotheses that cannot be tested by other means.

Androids have a number of potential applications. They can serve as patient simulators to help doctors, nurses and dentists better learn human responses and better care for patients. Teachers can learn how their students learn, and students can gain the communication skills they need for their professional careers. Even police officers can learn how to better "read" the people they question and discover the truth.

About the Presenter

Karl F. MacDorman is Associate Professor of Informatics at Indiana University in the Human-Computer Interaction program and Director of the Android Science Center at IUPUI. Dr. MacDorman received his Bachelor of Arts degree in computer science from University of California, Berkeley in 1988 and his Ph.D. in machine learning and robotics from Cambridge University in 1996. Most recently MacDorman was an associate professor at Osaka University, Japan (2003-2005). Previously, he was assistant professor in the Department of Systems and Human Science at the same institution (1997-2000), and a supervisor (1991-1997) and research fellow (1997-1998) at Cambridge University. Dr. MacDorman has also worked as a software engineer at Sun Microsystems and as chief technology officer for two venture companies. His research focuses on human-robot interaction. He has co-organized the workshop Toward Social Mechanisms of Android Science at CogSci 2005 and CogSci/ICCS 2006, the workshop Views of the Uncanny Valley at IEEE Humanoids 2005, and the special session Psychological Benchmarks of Human-Robot Interaction at IEEE Ro-Man 2006 and has edited special issues on these topics for *Connection Science* and *Interaction Studies*. He has published extensively in robotics, machine learning, and cognitive science.

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