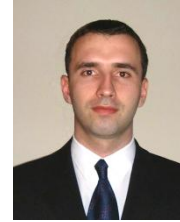


**报告题目** 设计前沿研讨会:  
Towards embodied human-system interaction based on affordances of cyber-physical system

**报告人** Dr. Zoltán Rusák  
Faculty of Industrial Design Engineering  
Delft University of Technology



**报告时间** 9.00am-12.00am, 3rd July 2014  
**报告地点** 精密仪器系系馆四楼会议室 4304

FIT Building

**主办单位** 机械系设计所

**简介** Embodied human-computer and human-system interaction has already received tremendous attention from HCI research communities, yet there are a number of issues that has not been addressed so far. In this presentation I propose a novel human system interaction model and investigate related research challenges. In my vision, heterogeneous computing technologies together with products and artefacts of natural and artificial environment are forming a service oriented cyber-physical system. These services are offered to the user through task oriented interaction, which is achieved based on available resources of the environment that are purposefully manipulated by heterogeneous computing technologies. Through this manipulation, the environment resources are presented to users considering users' capabilities and preferences and possible workflows for completing task(s) at hand. This concept envisions a highly adaptive environment capable to (i) monitor physical, mental and emotional state of users, (ii) intelligently reason about users' intentions, (iii) purposefully adapt and reconfigure the environment to "afford" goal oriented task execution, (iv) seamlessly inform users about the environment's capacities and capabilities, and (v) synergistically assist users in task completion. Implementation of this vision, however, holds many theoretical and practical challenges. Using demonstrative case studies, the seminar intends to demonstrate the limitation and applicability of emerging cyber physical technologies for implementing embodied human-system interaction.

**Bio:**

Zoltán Rusák is an Assistant Professor at the Faculty of Industrial Design Engineering, Delft University of Technology, The Netherlands. He obtained his Master degree in Mechanical Engineering from the Budapest University of Technology and Economics in 1998. He earned his PhD in Computer Aided Design Engineering from the Delft University of Technology in 2003. His research interests include computer support of geometric modelling, use process simulation in virtual reality environments, and mobile, portable and ubiquitous computing for design applications. He is the General Secretary of the Tools and Methods of Competitive Engineering biannual symposia.

清华大学重点学科高水平国际合作创新团队支持项目

Contact: Hou Yuemin, Tel: 62773470

email: hym01@mails.tsinghua.edu.cn

