Symposium “Selected Topics in Science and Technology”

MONDAY, JANUARY 27, 2020
Faculty Club, 4th floor

08:55 – 09:00  Welcome/Introduction

DATA SCIENCE AND MACHINE LEARNING IN ENGINEERING

09:00 – 09:30  Georgios Arampatzis, ETH Zurich
Bayesian Uncertainty Quantification and Optimal Sensor Placement: Applications in Engineering

09:30 – 10:00  Eurika Kaiser, University of Washington
Data-Driven Discovery and Control of Nonlinear Dynamical Systems

10:00 – 10:30  Benjamin Schaefer, Queen Mary University of London
Data-Driven Analysis of Complex Systems

10:30 – 11:00  COFFEE BREAK

DATA SCIENCE AND MACHINE LEARNING IN HEALTH

13:30 – 14:00  Seyed-Ahmad Ahmadi, Ludwig-Maximilians-Universität München
Graph Neural Networks for Population Modeling and Multimodal Decision Support in Health

14:00 – 14:30  Daniele Ramazzotti, University of Milano-Bicocca
Characterizing the Molecular Mechanisms Involved in Cancer Development and Clinical Response

14:30 – 15:00  Solveig Vieluf, University of Paderborn / Harvard Medical School
Seizure Forecasting from Wearable Devices – The Potential of Continuous Monitoring Tools for Health Care

15:00 – 15:30  COFFEE BREAK

TECHNOLOGY DESIGN

17:00 – 17:30  Jan Auernhammer, Stanford University
Researching Human Thinking and Activities in and through Design
**Symposium “Selected Topics in Science and Technology”**

**TUESDAY, JANUARY 28, 2020**

*Faculty Club, 4th floor*

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<td><strong>Electron Microscopy - Functional Nanomaterials</strong></td>
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| 09:00  | Ana Casañal, MRC-Laboratory of Molecular Biology  
Mechanistic Insights into RNA Modifying Machines |
| 09:30  | Benjamin Engel, Helmholtz Zentrum München  
Exploring Molecular Landscapes Inside Cells With In Situ Cryo-Electron Tomography |
| 10:00  | Christian Matt, Harvard University  
Artificial Topological Quantum Materials |
| 10:30  | Tangi Aubert, Ghent University  
Programmable 3D Printed Nanomaterials |
| 11:00  | **Coffee Break** |
| 14:30  | **Functional Nanomaterials**                |
| 14:30  | Barbara Lechner, Technical University of Munich |
| 15:00  | Florian Auras, University of Cambridge  
Crystalline Cage Frameworks |
| 15:30  | Maria Chiara Di Gregorio, Weizmann Institute of Science  
Colloidal "Chemical Toolkits" for In-Situ Reactions |
| 16:00  | Julien Warnan, Technical University of Munich  
Organic and Hybrid Functional Materials towards Solar Energy Conversion |
| 16:30  | **Coffee Break** |
Symposium “Selected Topics in Science and Technology”

Wednesday, January 29, 2020
Faculty Club, 4th floor

Data Science and Machine Learning in Chemistry

09:00 – 09:30
Oleksandra Kukharenko, University of Konstanz
*Analysis of Dynamical Systems in Application to Chemical Data and Beyond*

09:30 – 10:00
Simon Olsson, Freie Universität Berlin
*Machine Learning in Biophysical Chemistry*

10:00 – 10:30
Daniel Reker, Massachusetts Institute of Technology
*Machine Learning for Chemical Decision Making in Drug Discovery and Delivery*

10:30 – 11:00
Coffee Break

Secure Connected Systems - Technology Design

13:30 – 14:00
Shahin Tajik, University of Florida
*The Role of Photons in Embedded Systems Security*

14:00 – 14:30
Matthias Wählish, Freie Universität Berlin
*Internet Research for Secure Connected Systems*

14:30 – 15:00
Apostolis Zarras, Maastricht University
*Exploring the Security of Connected Systems*

15:00 – 15:30
Pierluigi D'Acunto, ETH Zurich
*Force Material Form*

15:30 – 16:00
Coffee Break