

# Materials Science 50<sup>th</sup> Anniversary Seminar

Tampere University, Hervanta Campus, Konetalo, Hall K1705

Tampere, 24.10.2019

## Program

**8.30 Poster session**

**9.00 Opening of the seminar**

Dean Martti Kauranen, Tampere University, Faculty of Engineering and Natural Sciences

**9.15 Materials Science in Tampere – A brief history**

Prof. Em. Toivo Lepistö, Tampere University

## Session 1: Advanced Materials Processing

**9.40 ScCO<sub>2</sub> assisted processing of ceramic materials**

M.Sc. Aaretti Kaleva, Tampere University

**10.00 Approaches for linking the spray process and coating performance by using in-situ monitoring of particles and deposition**

M.Sc. Tommi Varis, Tampere University

**10.20 Materials and processing development for sustainable packaging solutions**

M.Sc. Juuso Toriseva, Tampere University

**10.40 Destroy and degrade polymers: the roles of simulations and mechanics**

Asst. Prof. Mikko Kanerva, Tampere University

**11.00 Laboratory tours**

**11.30 Poster session, coffee, and sandwiches**

## Session 2: Materials Performance

**12.30 From microscopic to macroscopic – the role of interfaces in composite materials**

Asst. Prof. Essi Sarlin, Tampere University

**12.50 The manipulation processes for mechanical properties of steel materials**

M.Sc. Sakari Terho, Tampere University

**13.10 Relevance of laboratory wear experiments for the evaluation of in-service performance of materials**

Dr. Kati Valtonen, Tampere University

**13.30 Fretting research in mechanical engineering**

Dr. Janne Juoksukangas, Tampere University

**13.50 Laboratory tours**

## Session 3: Materials Research

**14.20 Residual stress, microstructure and cracking characteristics of flame cut thick steel plates**

M.Sc. Tuomas Jokiaho, Tampere University

**14.40 Experiments at Extreme Conditions**

Asst. Prof. Mikko Hokka, Tampere University

**15.00 In-situ SEM micromechanics**

Asst. Prof. Gaurav Mohanty, Tampere University

**15.20 Future of Engineering Materials Science**

Prof. Erkki Levänen, Tampere University

**15.40 Laboratory tours**