Program Meeting Materials - Tuesday 10 December 2019

REGISTRATION

08.00 **Coffee and registration**
Atrium Lounge

OPENING AND INTRODUCTION

09.00 **Rob Boom (M2i Senior Scientific Advisor & Chairman of the day)**
Opening
Rotonde

09.05 **Bert van Haastrecht (M2i)**
Introduction Meeting Materials
Rotonde

09.20 **Amar Mavinkurve (NXP)**
Keynote Material interactions in microelectronics packaging
Rotonde

9.50 **Amir Zadpoor (TU Delft)**
Keynote Meta-biomaterials
Rotonde

ELEVATOR PITCHES

10.20 **Elevator pitches (20 x 90 sec)**
Rotonde

COFFEE BREAK

10.50 **Coffee break, networking and exhibition**
Atrium

THEME SESSIONS

	Track 1 **Special Steels** *Rotonde*	**Track 2** **Integrated Systems, Digital Future** *Boston 11*	**Track 3 - 4TU.HTM** **Education in Materials Science** *Boston 9*	**Track 4** **3DMed: Medical Materials & 3D Printing - Session 1** *Boston 13*	
Session chair	***Maria Santofimia (TU Delft)***	***Jurriaan Schmitz (UT)***	***Laurens Katgerman (TU Delft)***	***Amir Zadpoor (TU Delft)***	
11.15	**Piet Kok (Tata Steel)** - Microstructure design for the multiscale simulation of advanced steel grades	**Sriharsha Nistala (Tata Consultancy Services) -** Digital Twins for Online Process Simulation and Optimization	**Antonis Vakis (RU Groningen)** - Mechanical and Materials Engineering at the University of Groningen	**Eva Hofland (Oceanz)** - Additive Manufacturing of Polymers for Medical Applications	
11.40	**Xukai Zhang (RUG) -** Microstructure, precipitate and property evolution in cold rolled Ti-V high strength low alloy steel	**Caiyang Wei (TU/e) -** Integrated Energy and Thermal Management of Electrified Powertrains - A Material Perspective	**Marcel Sluiter (TU Delft) -** Modern Computational Tools in the Materials Science Curriculum	**Chris Arts (Maastricht UMC) -** Novel 3D printed Ti cage design and methods to boost spinal fusion	
12.05	**Muhammad Niazi (UT) -** Strain gradient enhanced crystal plasticity model: Application to electric steels	**Bojana Rosic (UT) -** Smart assessment of concrete structures by seamless integration of data and models	**Ton Bor (UT) -** How to create nucleation and growth in student learning of materials science	**Victor de la Rosa (Avroxa) -** Poly(2-oxazoline)s as versatile biomaterials	

LUNCH

12.30 **Networking lunch and exhibition**
Atrium

THEME SESSIONS

	Track 5 **Sustainability & Circular Economy** *Boston 15*	**Track 6** **Joining Technology** *Boston 11*	**Track 7 - 4TU.HTM** **Education in Materials Science** *Boston 9*	**Track 8** **3DMed: Medical Materials & 3D Printing - Session 2** *Boston 13*	**Track 9** **MustMef: Multiscale Simulation Techniques for Metal Forming** *Rotonde*
Session chair	***Jos Brouwers (TU/e)***	***Marcel Hermans (TU Delft)***	***Jilt Sietsma (TU Delft)***	***Jie Zhou (TU Delft)***	***Piet Kok (Tata Steel)***
14.00	**Benjamin Sprecher (Leiden University) -** Resilience in the supply chains of critical materials	**Amin Ebrahimi (TU Delft)** - A new simulation-based approach to welding process optimisation	**Laurens Katgerman (HU) -** Materials Science in an Industrial Environment	**Dimitrios Stamatialis (UT)** - Development of (bio)artificial organs to mimic and / or replace patient failing organs	**Leo Kestens (Ghent University)** - Modelling textures and r-values of metal sheets for deep drawing
14.20	**Chrysoula Ioannidou (TU Delft) -** Phase transformation and precipitation kinetics in Vanadium micro-alloyed steels	**Gautam Agarwal (TU Delft) -** Safe alloying limits and process conditions to prevent hot cracking during laser welding of automotive steel grades	**Johan Bijleveld (TU Delft) -** Challenging Materials Characterisation	**Mohammad Ahmadi (Amber Implants) -** 3D printed customized spinal implants	**Franz Roters (Max-Planck Institute) -** Calibrating yield surface models based on full field crystal plasticity simulations
14.40	**Guchan Yapar (Tata Steel) -** Reconnecting the values of carbon and steel in the carbon lean prospect	**Romina Lopes Fernandes (TU Delft) -** Characterisation of crack growth in bi-material bonded joints with thick bondlines	**Mieke Boon (UT) -** What is epistemological responsibility – and how can we teach it?	**Sebastien Callens (TU Delft) -** How soap films inspire 3D-printed bone scaffolds	**Tuan Nguyen Minh (CRM Ghent) -** Reconstruction of Austenite Microstructures in Steels by Optimisation of Misorientation Functions
15.00	**Sijmon van der Wal (Composite Analytica) -** Reliable Composite Service Life Predictions for Harsh Environments	**Florent Gauvin (TU/e)** - Durability study of glues for exterior panel bonding	**Masoumeh Faraji (Coventry University) -** Manufacturing Technology and Materials for Engineers: Inquiry- Based Learning and Application Driven Teaching		**Jesus Galan Lopez (TU Delft)** - Modelling of Metal Microstructures by the Grain Size Orientation Distribution Function

COFFEE BREAK

15.20 **Coffee break, networking and exhibition**
Atrium

PLENARY FINAL SESSION

15.50 **Beatriz Noheda (RUG)**
Keynote Ferroelectric materials: from actuators to neuromorphic devices
Rotonde

16.20 **Bert van Haastrecht (M2i)**
Closure
Rotonde

DRINKS & CLOSURE

16.30 **Drinks**
Atrium