

# Program M2i Conference - 12 December 2016

## REGISTRATION

**08.30 Coffee & Registration**  
Room: Event Hall meeting point

## OPENING AND INTRODUCTION

**09.30 Rob Boom - Chair (M2i Senior Scientific Advisor)**  
State of the Institute  
Room: Event Hall

**09.45 Debashish Bhattacharjee - Tata Group**  
**Keynote** Making money from materials  
Room: Event Hall

**10.15 Marco de Baar - DIFFER**  
**Keynote** Too hot to handle? Materials for nuclear fusion reactors  
Room: Event Hall

## COFFEE BREAK

**10.45 Coffee Break**  
Room: Event Hall meeting point

## M2i TECHNOLOGY THEMES

	<b>Track 1</b> Applied Mechanical behaviour at Multiple Scales <i>Room: 8</i>	<b>Track 2</b> Functional Materials and Durable Surfaces <i>Room: 9</i>	<b>Track 3</b> Composites and Additive Manufacturing and Welding <i>Room: 10</i>
<b>Session chair</b>	<b>Ton van den Boogaard</b>	<b>Herman Terry</b>	<b>Ton Peijs</b>
<b>11.00 Eisso Atzema, Tata Steel</b> Getting to grips with edge ductility in Advanced High Strength Steel	<b>Arnoud de Vooy, Tata Steel</b> Making and using Cr3+ based coatings for packaging steel	<b>Morteza Abouhamzeh, TUD</b> Fusion bonding in thermoplastic-thermoset composite joints: Thermal degradations	<b>Steffen Grunewald, TUD</b>
<b>11.20 Aydar Akchurin, M2i &amp; UT</b> Generation of Wear Particles in Lubricated Contacts During Running In	<b>William Mao, M2i &amp; TUD</b> Selective oxidation of advanced high strength steels: Modelling and Experiment	<b>Chris Straub, M2i &amp; TU/e</b> Copper slag: How an inert material can be reactive	
<b>11.40 Matthijs Oomen, UT</b> Wheel-rail friction modifiers to stabilize friction and reduce wear	<b>Shoshan Abrahami, M2i &amp; TUD</b> Cr(VI)-free pretreatments for adhesive bonding of aerospace aluminium alloys		
<b>12.00 Break</b>			
<b>12.20 Kees Kuijpers, M2i &amp; TU/e</b> Particle transport during capillary sorption of model inks in porous media	<b>Leo de Jeer, RUG</b> Microscopy study of plastic deformation recovery and air passivation in stainless steels - BESTSHAVING	<b>Martino Marchetti, M2i &amp; TUD</b> New high temperature polymers for composite applications: bridging the thermoset divide	
<b>12.40 Priyam Samantray, TU/e</b> The level set method and X-FEM in predicting the hygroscopic swelling of fibrous network	<b>Yueting Liu, M2i</b> Understanding of the hydro-abrasive wear mechanism in the dredging industry	<b>Ahmed Barakat, M2i &amp; TU/e</b> Moisture transport during first-drying of monolithic refractories: an NMR study	

## LUNCH

**13.00 Lunch**  
Room: Event Hall meeting point

## M2i HUMAN CAPITAL

**14.00 Human Capital session for industry**  
Room: Event Hall

## M2i TECHNOLOGY THEMES

	<b>Track 4</b> Microstructure & materials behaviour <i>Room: 8</i>	<b>Track 5</b> Functional Materials and Durable Surfaces <i>Room: 9</i>	<b>Track 6</b> Composites and Additive Manufacturing and Welding <i>Room: 10</i>
<b>Session chair</b>	<b>Jilt Sietsma</b>	<b>Maria Loi</b>	<b>Ian Richardson</b>
<b>14.30 Kees Bos, Tata Steel</b> Steel strip through process microstructure evolution modelling	<b>Andre Ruybalid, M2i &amp; TU/e</b> In-situ identification of interface properties within 3D microelectronic devices	<b>Marcel Hermans, TUD</b> The Amazing World of Additive Manufacturing of Metals	
<b>14.50 Constantinos Goulas, M2i &amp; TUD</b> Novel heat treatments for automotive spring steels: Microstructure and performance	<b>Kuang-Sheng Chung, TU/e</b> Micro-vibration evolution in reaction wheels	<b>Gautam Agarwal, TUD</b> Solidification cracking of AHSS during welding	
<b>15.10 Pina Mecozzi, TUD</b> Modelling of bainite formation in multiphase steels		<b>Abdulkadir Akyel, M2i &amp; TUD</b> Fatigue strength of the repaired cracks in welded connections made of very high strength steels	
<b>15.30 Break</b>			
<b>15.50 Jesus Galan Lopez, M2i &amp; TUD</b> Optimization of crystallographic texture for improved formability using Taylor based models	<b>Shuyan Shao, RUG</b>	<b>Ondrej Nenadl, RUG</b> Microstructural evolution in additive manufacturing with high power lasers	
<b>16.10 Xiaoxiao Li, Aachen</b> Bainite formation and properties in multiphase steels	<b>Tom Savenije, TUD</b> Metal halide perovskite solar cells	<b>Kevin Maloney, Cambridge</b> Micro-architected Adhesive Joints	

## DRINKS & POSTERS

**16.30 Drinks & Poster Session**  
Room: Event Hall meeting point

## PRE-DINNER, DINNER, AWARDS

**18.00 Pre-Dinner Keynote: Ionica Smeets**  
Room: Event Hall

**18.30 Dinner**  
Room: Event Hall meeting point

**19.45 After Dinner Entertainment - Scientific Quiz hosted by Ionica Smeets**  
Room: Event Hall meeting point

**20.30 Dessert**  
Room: Event Hall meeting point

**21.00 Poster Prize & Award ceremony Scientific Quiz hosted by Ionica Smeets + closure drinks**  
Room: Event Hall meeting point

**21.30 The end**