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

Room: Event Hall

10.15 Marco de Baar - DIFFER

Keynote

Room: Event Hall

COFFEE BREAK

10.45 Coffee Break

Room: Event Hall meeting point

M2i TECHNOLOGY THEMES 11.00 Track 1 **Applied Mechanical behaviour at Multiple Scales Functional Materials and Durable Surfaces** Composites and Additive Manufacturing and Welding Session chair Ton van den Boogaard Herman Terryn Ton Peijs 11.00 Eisso Atzema, Tata Steel Arnoud de Vooys, Tata Steel Steffen Grunewald, TUD Getting to grips with edge ductility in Advanced High Making and using Cr3+ based coatings for packaging Strength Steel 11.20 Aydar Akchurin, M2i & UT William Mao, M2i & TUD Morteza Abouhamzeh, TUD Wear model to predict the generation of particles from Selective Oxidation of Advanced High Strength Steels: Fusion Bonding in Thermoplastic-Thermoset lubricated contacts contributing to the prediction of the Modelling and Experiment Composite joints: Thermal degradations 11.40 Matthijs Oomen, UT Shoshan Abrahami, M2i & TUD Chris Straub, M2i & TU/e Cr(VI)-free pretreatments for adhesive bonding of Wheel-rail friction modifiers to stabilize friction and Copper slag: How an inert material can be reactive reduce wear aerospace aluminium alloys **12.00** Break 12.20 Kees Kuijpers, M2i &TU/e Martino Marchetti, M2i & TUD Leo de Jeer, RUG Particle transport during capillary sorption of model Microscopy study of plastic deformation recovery and New high temperature polymers for composite inks in porous media air passivation in stainless steels - BESTSHAVING applications: bridging the thermoset divide 12.40 Priyam Samantray, TU/e Yueting Liu, M2i Ahmed Barakat, M2i & TU/e The level set method and X-FEM in predicting the Understanding of the hydro-abrasive wear mechanism Moisture transport during first-drying of monolithic hygroscopic swelling of fibrous network in the dredging industry 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

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| M2i TECHNOLOGY THEMES | | | |
| 14.30 | Track 4 | Track 5 | Track 6 |
| | Microstructure & materials behaviour | Functional Materials and Durable Surfaces | Composites and Additive Manufacturing and Welding |
| | Room: 8 | Room: 9 | Room: 10 |
| Session chair | Jilt Sietsma | Maria Loi | Ian Richardson |
| 14.30 | Kees Bos, Tata Steel | Andre Ruybalid, M2i & TU/e | Marcel Hermans, TUD |
| | Steel Strip Through Process Microstructure Evolution | In-situ identification of interface properties within 3D | |
| | Modelling | microelectronic devices | |
| 14.50 | Constantinos Goulas, M2i & TUD | Kuang-Sheng Chung, TU/e | Gautam Agarwal, TUD |
| | Novel heat treatments for automotive spring steels: | Reaction Wheel Technology Consolidation (ReWTeC) | Solidification cracking of AHSS during welding |
| | Microstructure and performance | | |
| 15.10 | Pina Mecozzi, TUD | Yasemin Tezsevin, TU/e | Abdulkadir Akyel, M2i & TUD |
| | Bainite formation and properties in multiphase steels | Design and Demonstration of flexible functional surfaces | Fatigue strength of the repaired cracks in welded |
| | 2 | deposited by roll-to-roll Atmospheric Plasma Chemical | connections made of very high strength steels |
| 15.30 Break | | | |
| 15.50 | Jesus Galan Lopez, M2i & TUD | Shuyan Shao, RUG | Ondrej Nenadl, RUG |
| | Optimization of crystallographic texture for improved | | Microstructural evolution in additive manufacturing |
| | formability using Taylor based models | | with high power lasers |
| 16.10 | Xiaoxiao Li, Aachen | Tom Savenije, TUD | Kevin Maloney, Cambridge |
| | Bainite formation and properties in multiphase steels | Metal Halide Perovskite solar cells | Micro-architected Adhesive Joints |
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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