

Monday 14 July 2014

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| 8:00 | Registration | |
| 8:10 | | |
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| 8:30 | | |
| 8:40 | Opening | |
| 8:50 | | |
| 9:00 | Keynote I | Challenges in multifunctional composites manufacture and operation |
| 9:10 | | <i>Leif. Asp</i> (Swerea SICOMP, Sweden) |
| 9:20 | | |
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| 9:40 | Session I | Moulding defects in continuous fibre and randomly-oriented strands carbon/PEEK composites |
| 9:50 | Thermoplastic | <i>Benoit Landry</i> (Mc Gill University, Canada) |
| 10:00 | Composites I | Development of composite parts with RTM process based on new high fluidity thermoplastic polymers |
| 10:10 | Chair: Remko | <i>Gilles Orange</i> (Solvay, France) |
| 10:20 | Akkerman | Experimental investigation of the flow behavior of woven composite flakes in thermoplastic resin melt |
| 10:30 | | <i>Mohammed Iqbal Abdul Rashid</i> (University of Twente - TPRC, the Netherlands) |
| 10:40 | Refreshment Break | |
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| 11:00 | | |
| 11:10 | Session II | Multi-scale modelling of combined deterministic and stochastic fabric non-uniformity for realistic resin injection simulation |
| 11:20 | Numerical | <i>Andreas Endruweit</i> (University of Nottingham, United Kingdom) |
| 11:30 | Methods I | Capturing the variability of textile permeability from scanned images: A tool to automatically compute a textile permeability map |
| 11:40 | Chair: Suresh | <i>Elinor Swery</i> (University of Auckland, New Zealand) |
| 11:50 | Advani | A Stochastic approach to modeling the effect of material variation in out-of-autoclave prepreg consolidation |
| 12:00 | | <i>Rhena Helmus</i> (University of München, Germany) |
| 12:10 | | Direct generation of finite element meshes of composites micro and mesostructure from 3D imaging: application to flow computation |
| 12:20 | | <i>Luisa Silva</i> (Mines ParisTech, France) |
| 12:30 | Lunch Break | |
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| 13:30 | Session III | In situ flow visualization of void migration during out-of-autoclave thermoset prepreg processing |
| 13:40 | Void Dynamics | <i>Thomas Cender</i> (University of Delaware, United States) |
| 13:50 | Chair: Leif Asp | Volatile-Induced Voids in RTM Processing for Aerospace |
| 14:00 | | <i>Mark Anders</i> (University of Southern California, United States) |
| 14:10 | | Coupling the formation, movement, dispersion and effects of voids in resin infusion |
| 14:20 | | <i>Mark Brandley</i> (Brigham Young University, United States) |
| 14:30 | | Modeling hysteresis in liquid composite mold filling processes with void formation |
| 14:40 | | <i>Antonio García</i> (Universitat Politecnica de Valencia, Spain) |
| 14:50 | Poster Session and Refreshment Break | |
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| 15:50 | Session IV | Efficient method to characterize textile permeability as a function of fiber volume content with a single UD injection experiment |
| 16:00 | Characterisation | <i>Claudio di Fratta</i> (ETH Zurich, Zwitterland) |
| 16:10 | Methods | Influence of preforming technology on het out-of-plane impregnation behavior of textiles |
| 16:20 | Chair: C. | <i>David Becker</i> (Institut für Verbundwerkstoffe GmbH, Germany) |
| 16:30 | Binetruy | Rigid tooling for optical 3D wetting permeability measurements |
| 16:40 | | <i>Andrew George</i> (Brigham Young University, United States) |
| 16:50 | | Permeability Benchmark discussion |
| 17:00 | | <i>Edu Ruiz</i> (Ecole Polytechnique Montreal, Canada) |
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| 18:00 | Reception at City Hall Enschede | |

Tuesday 15 July 2014

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| 8:00 | | |
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| 8:30 | Keynote II | Vacuum Assisted Process® – Technology for large Aerostructure Components |
| 8:40 | | <i>Mathias Friedrich</i> (Premium Aerotec, Germany) |
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| 9:00 | | |
| 9:10 | Session V | A lubrication approach to friction in forming processes with thermoplastic UD composites |
| 9:20 | Thermoplastic | <i>Uli Sachs</i> (University of Twente - TPRC, The Netherlands) |
| 9:30 | Composites II | Pultrusion process for continuous fiber reinforced thermoplastic composites |
| 9:40 | Chair: Pascal | <i>Asami Nakai</i> (Gifu University, Japan) |
| 9:50 | Hubert | Modeling of unsaturated flow in woven fibers during direct injection-pultrusion process of thermoplastic composites |
| 10:00 | | <i>Arthur Babeau</i> (Ecole Centrale de Nantes, France) |
| 10:10 | Poster Session and Refreshment Break | |
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| 11:10 | Session VI | Numerical prediction of in-plane permeability for woven fabric with manufacture induced deformation |
| 11:20 | Numerical | <i>Xuesen Zeng</i> (University of Nottingham, United Kingdom) |
| 11:30 | Methods II | An adaptive monolithic Finite Element approach for the numerical simulation of compression Resin Transfer Molding processes |
| 11:40 | Chair: Alfred | <i>Jerome Claracq</i> (DOW Benelux BV, The Netherlands) |
| 11:50 | Loos | Eulerian approach for computational fluid-solid mechanics with capillarity issues for resin infusion based process |
| 12:00 | | <i>Pierre-Jacques Liotier</i> (Hexcel Reinforcements, France) |
| 12:10 | | Direct numerical orientation of fiber in shear flow for complex fluids |
| 12:20 | | <i>Patrice Laure</i> (Laboratoire J.A. Dieudonné, France) |
| 12:30 | Lunch Break | |
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| 13:30 | Session VII | Processing and characterization of multi-scale composites manufactured by out-of-autoclave Resin Film Infusion |
| 13:40 | Particle | <i>Pascal Hubert</i> (McGill University Montreal, Canada) |
| 13:50 | Dynamics | Packing and permeability properties of E-glass fibre reinforcements functionalised with capsules for self-healing applications |
| 14:00 | Chair: John | <i>Erica Manfredi</i> (EPFL Lausanne, Zwitterland) |
| 14:10 | Summerscales | Combining process simulation and sensing for optimised composites manufacturing |
| 14:20 | | <i>Nikos Pantelalis</i> (Synthesites Innovative Technologies, Greece) |
| 14:30 | Refreshment Break | |
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| 15:00 | Session VIII | Coupling between heat transfer and saturation: experimental investigation |
| 15:10 | Process | <i>Vincent Sobotka</i> (Université de Nantes, France) |
| 15:20 | monitoring & | Liquid Composite Moulding flow front characterization by Micro-CT |
| 15:30 | Control | <i>Matthew Streeter</i> (University of Southampton, United Kingdom) |
| 15:40 | Chair: Peter | Monitoring non-isothermal polymerization and crystallization of cyclic butylene terephthalate composites manufactured by RTM |
| 15:50 | Mitschang | <i>Inigo Ortiz de Mendibil</i> (Mondragon Unibersitatea, Spain) |
| 16:00 | | Increasing the robustness and reliability of cfrp production processes through systematic analysis and process monitoring |
| 16:10 | | <i>Christopher Buchmann</i> (EADS Innovation Works, Germany) |
| 16:20 | Refreshment Break | |
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| 16:50 | Session IX | Development of an innovative preforming process for the high-volume automotive sector |
| 17:00 | Innovative | <i>Maximilian Marquart</i> (BMW AG, Germany) |
| 17:10 | Processes | Tool vibrations for the advancement of the vacuum Infusion process |
| 17:20 | Chair: Paolo | <i>Nikos Pantelalis</i> (Synthesites Innovative Technologies, Greece) |
| 17:30 | Ermanni | In-mould gel-coating with a separator layer |
| 17:40 | | <i>John Summerscales</i> (Plymouth University, United Kingdom) |
| 17:50 | | Effect of surface treatment for continuous fibers on impregnation and mechanical properties of thermoplastic composites |
| 18:00 | | <i>Akio Ohtani</i> (Gifu University, Japan) |
| Conference Dinner at Bloemenbeek | | |

Wednesday 16 July 2014

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| 8:00 | | | |
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| 8:20 | Keynote III | | |
| 8:30 | | <i>Arjan Koorevaar</i> | (Polyworx, The Netherlands) |
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| 9:00 | Session X | Experimental analysis of flow behavior in the flax fiber reinforcement with double scale porosity | |
| 9:10 | Natural Fibre | <i>Van Hau Nguyen</i> | (Ecole nationale supérieure des Mines de Douai, France) |
| 9:20 | Composites | Capillary effects on flax fibres reinforcements; comparison of chemical and morphological effects on the local wetting dynamics | |
| 9:30 | Chair: Richard | <i>Monica Pucci</i> | (Ecole des Mines de Saint-Etienne, France) |
| 9:40 | Loendersloot | Shear viscosity data of natural fibre compounds for the modeling of polymer processes through reverse engineering | |
| 9:50 | | <i>F. Desplentere</i> | (KU Leuven, Belgium) |
| 10:00 | | Mold filling simulation in rtm processing of natural fiber composite materials | |
| 10:10 | | <i>G. Francucci</i> | (National University of Mar del Plata, Argentina) |
| 10:20 | Refreshment Break | | |
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| 10:50 | Session XI | Design of a quasi-unidirectional fabric for RTM process with high fluidity thermoplastic: longitudinal permeability and microstructure | |
| 11:00 | Material | <i>Guillaume Cazaux</i> | (University of Le Havre, UMR CNRS, France) |
| 11:10 | Modelling | A micromechanical model to simulate capillary flows in dual scale porous media | |
| 11:20 | Chair: | <i>Claudia Thurnher</i> | (Ecole Polytechnique Montreal, Canada) |
| 11:30 | Veronique | High temperature VARTM using LaRC-PETI-9 Polyimide Resin | |
| 11:40 | Michaud | <i>Alfred Loos</i> | (Michigan State University, United states) |
| 11:50 | | Modeling and validation of through thickness flows in fully wetted textiles during consolidation | |
| 12:00 | | <i>Mario Danzi</i> | (ETH Zürich, Zwitterland) |
| 12:10 | | Analysis of multi-scale effects on the permeability of fabrics for liquid composite molding | |
| 12:20 | | <i>Luca Bergamasco</i> | (Instituto Tecnológico de Aragón, Spain) |
| 12:30 | Lunch Break | | |
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| 13:30 | Session XII | Air evacuation in consolidation modeling of Out of Autoclave prepregs | |
| 13:40 | Numerical | <i>Theodosia Kourkoutsaki</i> | (University of München, Germany) |
| 13:50 | Methods III | Process modeling of composite materials – A holistic and generic simulation tool using poromechanics | |
| 14:00 | Chair: Francois | <i>Mohammad Rouhi</i> | (Swerea SICOMP, Sweden) |
| 14:10 | Trochu | An efficient scheme to model resin flow in a deformable porous media using RTM infusion simulation | |
| 14:20 | | <i>Suresh Advani</i> | (University of Delaware, United States) |
| 14:30 | | Impregnation of composites at the unit cell level | |
| 14:40 | | Edwin Lamers | (Reden BV, The Netherlands) |
| 14:50 | Closure at TPRC | | |
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