

CONFERENCE PROGRAMME & TECHNICAL SESSIONS

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| 04/06/2024   17:00 - 19:00<br>Computational Challenges in Industry and Sustainable Development: Sampling, Surrogate and Multi-fidelity Models for Inverse Analysis, Uncertainty Quantification and Optimisation II               | MS103B<br>Room: 1.08<br>Chaired by:<br>Dr. Matteo Giacomini (CIMNE - Universitat Politècnica de Catalunya, Barcelona, Spain), Dr. Lorenzo Tamellini (CNR, Italy) |
| Probabilistic Forecast of the Day-Ahead Electricity Consumption Profile with Stochastic Differential Equations<br><i>R. Saporiti*, F. Nobile, C. Pareja</i>                                                                      |                                                                                                                                                                  |
| Modeling and Uncertainty Quantification of Velocity Fluctuations for Derivation of Automotive Component Loads<br><i>P. Strähle*, S. Wolff-Vorbeck, T. Leyendecker, C. Proppe</i>                                                 |                                                                                                                                                                  |
| Using Bayesian Optimization for Cavity Shape Optimization in Injection Molding to Compensate for Shrinkage and Warpage<br><i>S. Tillmann*, S. Elgeti</i>                                                                         |                                                                                                                                                                  |
| Sustainable Manufacturing via Robust Optimization and Tailored Scatter<br><i>O. Nejadseyfi*</i>                                                                                                                                  |                                                                                                                                                                  |
| Application of NURBS-based Metamodel to Fused Deposition Modeling 3D Printing Process<br><i>M. Zani*, M. Carraturo, E. Panettieri, P. Marin, F. Auricchio, M. Montemurro</i>                                                     |                                                                                                                                                                  |
| Data-informed uncertainty quantification for laser-based powder bed fusion additive manufacturing by multi-fidelity surrogate modeling<br><i>M. Chiappetta, C. Piazzola, L. Tamellini*, A. Reali, F. Auricchio, M. Carraturo</i> |                                                                                                                                                                  |

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| 04/06/2024   17:00 - 19:00<br>Simulations of Polymers and Polymer Composites from Petrol and Biological Sources III                                                                                                     | MS118C<br>Room: 1.09<br>Chaired by:<br>Mx. Lukas Laubert (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany), Dr. Fabrice Detrez (University Gustave Eiffel, France) |
| Fast Estimation of Intralaminar Fracture Properties and Shear Hardening Law for Fibre-Reinforced Composites<br><i>E. Dinler*, I. Lopes, C. Furtado, P. Camanho</i>                                                      |                                                                                                                                                                               |
| Microscale Modeling of Fatigue in Thermoplastic Composites<br><i>D. Kovacevic, P. Hofman, I. Rocha, F. van der Meer*</i>                                                                                                |                                                                                                                                                                               |
| Modelling the Microscopic Behaviour of Fibre-reinforced Composites with Strain Gradient Plasticity<br><i>I. Rodrigues Lopes*, N. Klavzer, C. Furtado, F. Pires, P. Camanho, T. Pardoen</i>                              |                                                                                                                                                                               |
| Crashworthiness design using novel composite materials and an innovative analytical tool<br><i>P. Silva Campos*, D. Dalli, D. Mateus, D. Moreira, I. Rodrigues Lopes, T. Duarte, A. Arteiro, L. Vigna, A. Calzolari</i> |                                                                                                                                                                               |
| Numerical Modelling of Multi-ply Polymeric Cords<br><i>L. Pires da Costa*, M. Moscatelli, P. Caracino, G. Novati, C. Comi</i>                                                                                           |                                                                                                                                                                               |

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| 04/06/2024   17:00 - 19:00<br>New Trends In The Mathematical And Numerical Aspects Of Fluid-Structure Interaction III                                                                                                             | MS209C<br>Room: 1.10<br>Chaired by:<br>Dr. Miguel A. Fernández (Inria, France), Ms. Marina Vidrascu (INRIA & LJLL (Sorbonne Université CNRS), France) |
| A Combined Linear Poroelastic Model With Diffusion Optics for Photoplethysmography Simulations of Skin Perfusion<br><i>A. Lefieux*, F. Vergnet, M. Vidrascu, A. Bendjoudi, M. Willemet, J. Daraize, D. Lombardi, M. Fernández</i> |                                                                                                                                                       |
| A numerical study of fluid-structure interactions for a flexible flap in turbulent flow<br><i>T. Bano*, M. Heinrich, R. Schwarze</i>                                                                                              |                                                                                                                                                       |
| Numerical Simulation of Fluid-Structure Interaction in the Left Heart with Reduced Valve Modeling<br><i>O. Ruz*, J. Diaz, M. Vidrascu, D. Chapelle, P. Moireau, M. Fernández</i>                                                  |                                                                                                                                                       |