

## Table of Contents

### Preface

<b>Numerical Multiphysics CFD Modelling of Porosity Evolution in Thermoset Prepreg Microstructures</b>	
A.L. Briard, R. D'Elia, F. Berthet, A. Cheruet and F. Schmidt	1
<b>Thermoforming as Rapid Prototyping Strategy of Fishing Lures</b>	
A. Loth, R. Förster and J. Rösler	11
<b>Influence of Surface Finish and Energy Director on Ultrasonic Welding Process of PAEK/Metal Hybrid Structures</b>	
A. Korycki, J.D. Beguin, F. Chabert and C. Garnier	23
<b>Interfacial Welding of Two Different Reinforced Thermoplastics via TACOMA</b>	
K. Vrettos, S. Le Corre, J.L. Bailleul and E. Bertevas	35
<b>Development of a New Production Process for Thermally Conductive Resin for Additive Manufacturing Using mSLA Process</b>	
P. Müller, D. Kehret and S. Junk	45
<b>3D-Printed Pyrography Using PLA/Wood Filaments</b>	
F. Comino, J.A. Martínez-Sánchez, A. Pellegrini and R. Spina	55
<b>Thermal Crystallization Kinetics of PET, RPET and PEF for Sustainable Packaging</b>	
E. Gargadenec, Y.M. Luo, E. Monteiro and L. Chevalier	63
<b>Prediction of Temperature and Moisture Concentration in Autoclave-Cured Epoxy Resin Using Physics-Informed Neural Networks</b>	
W.O. Pedruzzi, I.F. Tosi, W.P.M. Quiroz, R. D'Elia, J.C.S. Dutra and W.B. da Silva	75
<b>Meshless Transient Thermal Modeling of Polymer Composite Curing with Exothermic Heat Generation</b>	
I.F. Tosi, W. Pedruzzi, W.P.M. Quiroz, R. D'Elia, J.C.S. Dutra and W. da Silva	87
<b>Material Characterization and Constitutive Modeling of PMMA for the Numerical Simulation of Vacuum Forming Process</b>	
H. Choi, M. Baek, Y.N. Kwon, D. Kim, D. Jeong and Y.I. Jeong	95
<b>Analysis of Large Deformation Characteristics and Formability of PMMA</b>	
M.J. Baek, Y.N. Kwon, D. Jeong, D. Kim, Y.I. Jeong and H. Choi	103
<b>From Deposition Sequence to Mechanical Response: A Macroscale Process Simulation of Material Extrusion</b>	
M.E. Di Nardo, P. Russo and P. Carlone	111
<b>Bio-Composites for Additive Manufacturing Study of the Mechanical Properties</b>	
F. Comino, J.A. Martínez-Sánchez, M. Zaza, S. Campanelli and R. Spina	125
<b>Multi-Objective Optimization of Injection-Molded Components for Defect Reduction and Warpage Minimization</b>	
K. Oubellaouch, R. Pelaccia, G. Zaniboni, V. Siciliani and B. Reggiani	133
<b>Determination of Gelation Zone Position in Reactive Thermoplastic Pultrusion by Analysis of Heating Power Consumption</b>	
M. Wilhelm, C. Schelleis, G. Zeeb and F. Henning	147
<b>Thermal Transient Modelling and Experimental Validation of Hybrid Polymer-Steel Moulds for Micro-Injection Moulding</b>	
G. Zaniboni, V. Basile, R. Pelaccia, R. Surace, K. Oubellaouch, F. Modica, L. Orazi, G. Rotella, L. Filice and I. Fassi	157