

Tuesday, September 4<sup>th</sup>

10:00	<b>Conference opening</b> – Claudia Marano
SESSION 1 – In memory of Francesco Caimmi Chair Francesco Baldi	
10:20	<b>Challenges in the prediction of long-term failure in thermoplastic polymers and their composites: dealing with the inevitable</b> L. Pastukhov, O. Erartsin, M. J.W. Kanters, <u>L.E. Govaert</u> Keynote Lecture
11:00	<b>Study of fatigue damage mechanisms in semi-crystalline and amorphous polyamides</b> <u>S. Djukic</u> , A. Bocahut, J. Bikard, D. R. Long
11:20	<b>Characterization and modelling of nonlinear long-term creep behaviour of polycarbonate</b> <u>S. Jorik</u> , A. Lion, M. Jöhlitz
11:40	<b>An approach to accelerated creep analysis of water saturated glass fibre reinforced polyamides</b> P. Guttman, G. Pilz, <u>G. Pinter</u>
12:00	<b>A comparison between K and G approaches for a viscoelastic material: the case of environmental stress cracking of HDPE</b> <u>M. Contino</u> , V. La Valle, L. Andena, M. Rink, G. Marra, S. Resta
12:20	<b>LUNCH</b>
SESSION 2 Chair Gregory McKenna	
14:00	<b>Experimental method for creep characterization of polymeric foam materials in media immersion</b> <u>Gerald Pilz</u> , Peter Guttman, Florian Oesterreicher, Gerald Pinter
14:20	<b>Influence of macromolecular orientation and environmental conditions on contact creep of semi-crystalline polymers surface</b> <u>J. Pepin</u> , A. Rubin, D. Favier, T. Roland, C. Gauthier
14:40	<b>Effect of moisture on silicon/epoxy interactions</b> D. Ferreira Vieira de Mattos, C. Wu, R. Huang, <u>K. M. Liechti</u>
15:00	<b>The effects of out-time, compaction and humidity on time-temperature dependent adhesive tack of pre-impregnated carbon fibre tapes for composites production</b> A. Endruweit, G. Y. H. Choong, S. Ghose, B. A. Johnson, N. A. Warrior, <u>D. S. A. De Focatiis</u>
15:20	<b>COFFEE BREAK</b>
SESSION 3 Chair Kenneth Liechti	
15:50	<b>On the consideration of environmental media to the properties of polymers in nonlinear continuum mechanics: balance equations, modelling and simulations</b> <u>A. Lion</u> , M. Jöhlitz
16:10	<b>Improvement of diffusion models for outdoor condition</b> <u>M. Varnier</u> , N. Sauvat, C. Montero, F. Dubois, J. Gril
16:30	<b>Long-term mechanical behavior of hardwood species in outdoor conditions</b> M. Varnier, <u>N. Sauvat</u> , C. Montero, F. Dubois, J. Gril
16:50	<b>Effects of moisture content and temperature on creep behaviour of wood</b> T. Y. Hsieh, <u>F. C. Chang</u>

Wednesday, September 5<sup>th</sup>

SESSION 1 Chair Paul Sotta	
9:00	<b>Time-dependent elasticity of tough hydrogels having permanent and transient crosslinks</b> T. Narita, J. Zhao, L. Debertrand, C. Creton - Keynote Lecture
9:40	<b>Nano-mechanical response of vapor deposited films</b> H. Yoon, <u>G. McKenna</u>
10:00	<b>Thermo-mechanical behaviour of multifunctional thermoplastic composites with thermal energy storage/release capability</b> A. Dorigato, G. Fredi, A. Pegoretti
10:20	<b>Flexural quasi-static and dynamic-mechanical behavior of multifunctional epoxy/carbon composites incorporating CNT-confined phase change materials</b> <u>G. Fredi</u> , A. Dorigato, L. Fambri, A. Pegoretti
10:40	<b>COFFEE BREAK</b>
SESSION 2 Chair Gerald Pinter	
11:10	<b>A homogenized anisotropic model for fibre-reinforced elastomers at finite strains</b> <u>V. Zatzko</u> , A. Lion, M. Jöhrlitz
11:30	<b>Thermo-mechanical modeling of the chemo-physical evolution of filled rubbers submitted to severe thermodynamic loadings</b> <u>R. Bouaziz</u> , S. Lejeunes, D. Eyheramendy, K.D. Ahose, F. Sosson
11:50	<b>Heterogeneous ageing of elastomers: experimental investigations and constitutive modelling by means of a modified reaction-diffusion equation</b> <u>A. Herzig</u> , M. Jöhrlitz, A. Lion
12:10	<b>Predicting crack growth in elastomeric materials</b> <u>K. Harban</u> , M. Tuttle
12:30	<b>Modeling large amplitude oscillatory shear in nanocomposite polymer materials</b> <u>P. Sotta</u> , D. R. Long, H. Montes, F. Lequeux
12:50	<b>A phenomenological constitutive model for the viscoelastic deformation of elastomers including the Mullins effect</b> <u>V. Annarasa</u> , A. Popov, D. S. A. De Focatiis
13:10	<b>LUNCH</b>
SESSION 3 Chair Christian Gauthier	
14:30	<b>Comparison of bond rupture and rate dependent traction-separation relations for an Epoxy/Silicon interface</b> T. Yang, R. Huang, <u>K. Liechti</u>
14:50	<b>Overview of different approaches for modelling the rate dependent mechanical behaviour of fibre reinforced polymers</b> <u>A. Kalteis</u> , M. Reiter, M. Jerabek, Z. Major
15:10	<b>The interfacial shear strength of carbon nanotube sheet wrapped carbon fibre composites</b> X. Wang, M. J. De Andrade, R. Baughman, S. Roy, <u>H. Lu</u>
15:30	<b>COFFEE BREAK</b>
SESSION 4 Chair Alexander Lion	
16:00	<b>The magic angle effect for pressurized nonlinear viscoelastic fibre reinforced tubes</b> <u>A. Sedal</u> , A. Wineman
16:20	<b>Peristaltic flow of thixotropic materials: a numerical study</b> N. P. Khabazi, P. Sadeghi, <u>K. Sadeghy</u>
16:40	<b>Impact and vibration isolation based on the high-pressure dissipative bulk and granular system technology</b> M. Bek, <u>I. Emri</u>
17:00	<b>Improving performance of polymeric vibration isolation elements using hydrostatic pressure</b> <u>M. Bek</u> , I. Emri

Thursday, September 6<sup>th</sup>

SESSION 1 Chair Leon Govaert	
9:00	<b>On the creep response of polymer nanocomposites</b> Alessandro Pegoretti Keynote Lecture
9:40	<b>Prediction of tensile and flexural creep failure time for unidirectional CFRP</b> <u>Y. Miyano</u> , M. Nakada
10:00	<b>A constitutive model for the cyclic behaviour of SFRP composites</b> <u>Y. Marco</u> , L. Leveuf, L. Navratil, V. Le Saux, J. Olhagaray, S. LeClercq
10:20	<b>Fracture toughness of high-performance short fibre polyamide-based composites at low and high loading rates</b> S. Pandini, S. Gatti, <u>F. Baldi</u>
10:40	
11:00	<b>COFFEE BREAK</b>
SESSION 2 Chair Tetsuharu Narita	
11:30	<b>Self-healing and shape-memory hydrogels via micellar polymerization</b> <u>D. Antonioli</u> , V. Gianotti, E. Dall'Acqua, K. Sparnacci, M. Laus
11:50	
12:10	<b>Micromechanics of oriented semicrystalline polymers</b> <u>J.A.W. van Dommelen</u> , M. Mirkhalaf J. Furmanski, L.E. Govaert, M.G.D. Geers
12:30	<b>Time dependent 3D stress/strain fields versus void distribution ahead of a notch tip for semi-crystalline polymers</b> <u>L. Laiarinandrasana</u> , N. Selles
12:50	<b>The role of shear in better understanding the thermo-mechanical response of PEEK and PC</b> W. Li, Z. Zhang, <u>M. Negahban</u> , G. Gazonas, E. N. Brown, Z. Li
13:10	<b>LUNCH</b>
SESSION 3 Chair Francesco Briatico Vangosa	
14:30	<b>Molecular dynamics simulation of viscoelastic behaviour of polypropylene</b> <u>T. Sakai</u> , Y. Kudo, S. Kobayashi, K. Kageyama Keynote Lecture- Knauss Prize Awardee
15:10	<b>Molecular simulation of viscoelastic properties of polymers: towards atomistic models</b> <u>A. David</u> , G. Milano, G. Raos
15:30	<b>COFFEE BREAK</b>
SESSION 4 Chair Davide De Focatiis	
16:00	<b>Explicit finite element methods for nearly-incompressible materials</b> V. Yurdabak, <u>S. Özüpek</u>
16:20	<b>Fracture and fatigue behavior of thermoplastic elastomers</b> <u>G. Scetta</u> , C. Creton, M. Ciccotti, P. Heuillet
16:40	<b>A novel device for testing soft materials under shear and compression loading conditions</b> <u>F. Pelayo</u> , E. Barrientos, A. Álvarez-Vázquez, M. Muñiz-Calvente, M.J. Lamela-Rey, A. Fernández-Canteli
17:00	<b>Effect of calendering temperatures on mechanical properties of polypropylene foils</b> <u>A. Aulova</u> , M. Bek, L. Slemenik Perše
	<b>CONFERENCE DINNER</b>

Friday, September 7<sup>th</sup>

SESSION 1	
Chair Igor Emri	
09:00	<b>A robust parameter estimation for viscoelastic polymers under uncertainty</b> L. Yue, M. C. Heuzey, J. Jalbert, M. Levesque
09:20	<b>A compatible model for analyzing the temperature effect on the relaxation modulus</b> A. Álvarez-Vázquez, F. Pelayo, M. Muñoz-Calvente, S. Blasón, M.J. Lamela-Rey, A. Fernández-Canteli, E. Castillo
09:40	<b>Time-dependent oxidative damage model for ceramic matrix composite materials</b> R. B. Hall, R. A. Brockman, M. Braginsky, T. A. Parthasarathy
10:00	<b>Design of creep-resistant austenitic alloy with high Al-content</b> A. Facco, M. Couvrat, D. Magne, R. Danoix, M. Roussel, P. Le Baillif, A. Guillet, C. Pareige
10:20	<b>COFFEE BREAK</b>
SESSION 2	
Chair Lucien Laiarinandrasana	
10:50	<b>Viscous dissipation and thermo-mechanical coupling effects in the polymers</b> P. Yadav, O. Arnould, S. Bardet, A. Chrysochoos
11:10	<b>Theoretical and computational modeling of visco-electro-elastic active tissues with distributed fibers</b> A. Pandolfi, A. Gizzi, M. Vasta
11:30	
11:50	<b>A new model describing the one-way and two-way shape-memory effect in polymers</b> G. Scalet, S. Pandini, F. Auricchio
12:10	<b>Fracture framework for plastics pipes: experimental work and finite element analysis on double cantilever beam polyethylene specimens</b> F. Rueda, C. Hernández, P. Frontini
12:30	<b>Closing remarks</b> – Francesco Briatico Vangosa
12:45	<b>LUNCH</b>