Luca ANDENA.
Born in Busto Arsizio (VA), on 5 November 1975.
• 2001: M.Sc. degree with honours in Materials Engineering at Politecnico di Milano (Italy)
• 2004: visiting student at Imperial College London (UK) under guidance of professor Gordon Williams
• 2005: Ph.D. with honours in Materials Engineering at Politecnico di Milano (Italy)
• April 2005 – June 2008: Research Assistant at the Department of Chemistry, Materials and Chemical Engineering Department of Politecnico, Milan (Italy)
• December 2008: Appointed Assistant Professor (ING-IND/22 – Materials Science and Technology) at the Industrial Processes Faculty of Politecnico di Milano (Italy).

RESEARCH ACTIVITIES. He mainly took interest in technology and physical-mechanical properties of polymers, composites and adhesives. His research, focused on the determination of structure-properties relationships, has been characterized by an experimental approach often paired with numerical modelling of the materials' mechanical behaviour.
Besides his research activities as a M.Sc. and Ph.D. student and later on as an assistant researcher, he also got involved in several projects with companies which produce or use polymers, composites and adhesives. On various instances these projects implicated the development of numerical models for predicting the mechanical behaviour of viscoelastic materials. Recently he has been working on the mechanical characterization of polymeric foams under both static and dynamic conditions.

REVIEW ACTIVITIES. Reviewer for Engineering Fracture Mechanics and the European Journal of Tribology.

OTHER ACTIVITIES. Member of the Technical Committee 4 of the European Structural Integrity Society (ESIS) since 2002. ESIS-TC4 is devoted to the development of testing methods for polymers, composites and adhesives based on fracture mechanics, to be proposed as ISO standards. He participated in activities related to J_c testing, Essential work of fracture (EWF), Environmental stress cracking (ESC) and Peel testing.

PARTICIPATION IN NATIONAL AND INTERNATIONAL RESEARCH PROJECTS. Member of the Milan Research Unit in: PRIN 2008; Regione Lombardia STIMA (Strutture Ibride per la Meccanica e l'Aerospazio) and SPARR (Sistemi compositi Periodici per l'Assorbimento e la riduzione del Rumore); Industria 2015 ALVEOPLAST and TETRA; Politecnico 5x1000 CINEMAT.

PUBLICATIONS. Author of more than 30 papers.
L. Andena, M. Rink, F. Polastri. Simulation of PTFE sintering: Thermal stresses and deformation behaviour. Polymer Engineering and Science, 44, 1368-1378, 2004.
L. Andena, M. Rink, J. G. Williams. Cohesive zone modeling of fracture in polybutene. Engineering Fracture Mechanics, 73, 2476-2485, 2006.
L. Andena, M. Rink, R. Frassine, R. Corrieri. A fracture mechanics approach for the prediction of the failure time of polybutene pipes. Engineering Fracture Mechanics, 76 (18), 2666-2677, 2009.
G. Salerno, S. Mariani, A. Corigliano, F. Caimmi, L. Andena, R. Frassine. Experimental-numerical investigation of impact-induced failure in layered composites. Computer Methods in Mechanics. Advanced Structured Materials, 1 (VI), 493-504, 2010.
P. Kurkcu, L. Andena, A. Pavan. An Experimental Investigation of the Scratch Behaviour of Polymers: 1. Influence of Rate-dependent Bulk Mechanical Properties. Wear, 290-291, 86-93, 2012.
L. Andena, L. Castellani, L. Franchini, A. Mendogni, J. Menegari, M. Rink, F. Sacchetti. Determination of ESC resistance of polymers: Effects of loading history and testing configuration. Engineering Fracture Mechanics, in press.
M. Benanti, L. Andena, F. Briatico-Vangosa, A. Pavan. Viscoelastic behavior of athletics track surfaces in relation to their force reduction. Polymer Testing, 32, 52-59, 2013.
R. Fedele, A. Ciani, L. Galantucci, M. Bettuzzi, L. Andena. A regularized, pyramidal multi-grid approach to global 3D-Volume Digital Image Correlation based on X-ray micro-tomography. Fundamenta Informaticae, in press.
L. Andena, F. Briatico, M. Benanti, S. Moschini, S. Manzoni, R. Fedele. Characterization and modelling of the mechanical and acoustical properties of a PVC rigid foam. EUROTEC 2013, Lyon, France, July 4-5, 2013.
F. Briatico-Vangosa, L. Andena, E. Cazzoni, M. Benanti, A. Pavan, S. Mariani. Hyperelastic modeling of shock absorption in track surfaces. EUROTEC 2013, Lyon, France, July 4-5, 2013.