

Curriculum vitae

Ing. Stefano Pandini

Associate professor (SSD ING-IND/22)

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Personal statement:

1975: born in Trento (I).

2003: degree in Materials Engineering at the University of Trento (full marks “cum laude”)

2007: Ph.D. degree in Materials Engineering at the University of Trento

2005-2018: Assistant Professor in Materials Science and Technology at Department of Mechanical and Industrial Engineering, University of Brescia

2018-today: Associate Professor in Materials Science and Technology at Department of Mechanical and Industrial Engineering, University of Brescia

Current position:

S. Pandini is Assistant Professor in Materials Science and Technology.

Teaching activity:

His teaching activities concerns the mechanics of polymeric and composite materials and the characterization of polymeric materials, given in the course of the University of Brescia, at the University of Padova, in courses of PhD programmes of the University of Brescia and in summer schools organized at the University of Brescia, in workshop and technical symposia.

Stefano Pandini was advisor of more than 50 among bachelor and master thesis at the University of Brescia.

He is member of the “Mechanics and Industrial Engineering” PhD programme board at the University of Brescia and has been scientific tutor of PhD students.

He is member of the scientific association INSTM (Consorzio Interuniversitario per la Scienza e Tecnologia dei Materiali).

Research activity:

Stefano Pandini is involved in research projects which mainly concerns:

1. mechanics of polymeric and composite materials: investigation on the effects of time and temperature on the viscoelastic behavior of polymers at small and large deformations; thermal and mechanical characterization of polymer-based functional materials (micro- and nano-structured polymer-based systems; nano-filled rubbers; strain sensing devices with polymeric substrates).

Representative publication: Pandini S., Bignotti F., Baldi F., Sartore L., Consolati G., Panzarasa G. (2017). Thermomechanical and large deformation behaviors of antiplasticized epoxy resins: Effect of material formulation and network architecture, Polymer Engineering and Science, Vol.57(6), p. 553-565, ISSN: 032-3888, doi: 10.1002/pen.24555

2. shape memory behavior of polymers: thermo-mechanical characterization of the shape memory response of polymer-based systems; structure-property correlations towards a tailored shape memory response; exploitation of the shape memory effect towards the realization of polymer-based systems and devices; exploitation of the shape memory effect in polymer-based 3D printed systems ("4D printing"). *Representative publication: Pandini S., Agnelli S., Merlettini A., Chiellini F., Gualandi C., Paderni K., Focarete M. L., Messori M., Toselli M. (2017). Multifunctional Electrospun Nonwoven Mats with Two-Way Shape Memory Behavior Prepared from Sol-Gel Crosslinked Poly(ϵ -Caprolactone), Macromolecular Materials and Engineering, Vol. 302 (8), Article Number 1600519, ISSN: 1438-7492, eISSN: 1439-2054, DOI: 10.1002/mame.201600519*

Current research activities are more closely connected with the biomedical field. Example of his activities in this field are: development of novel shape memory polymers that may be suitable for the realization of biomedical devices (tailoring of the material response to specific thermal stimuli; development of mechanical testing systems for the characterization of the forces exerted by tubular stents based on shape memory polymers); mechanical characterization of the correlation between stress, strain and electric resistance in sensing devices for biomedical applications (tongue pressure sensors for intra-oral devices; strain sensors for potential application in sensing gloves).

Pubblicazione rappresentativa: Pandini S., Ricco' T., Borboni A., Bodini I., Vetturi D., Cambiagli D., Toselli M., Paderni K., Messori M., Pilati F., Chiellini F., Bartoli C. (2014). Tailored One-Way and Two-Way Shape Memory Capabilities of Poly(ϵ -Caprolactone)-Based Systems for Biomedical Applications. JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, vol. 23(7), p. 2545-2552, ISSN: 1059-9495, doi: 10.1007/s11665-014-1033-5.

Further recent research interests regard: the radiation resistance of polymer-based systems and elastomers for engineering applications; development and characterization of micro- and nanostructured polymeric materials for biomedical applications; development of "green" composites for agriculture.

He was also involved in the development of various projects within consultant activities with various companies, and in national funded research projects.

He is author of 76 among peer-reviewed publications on international journals and contributions on volumes, and of several contributions to international and national conferences. His H-index is 18. (Data according to Scopus).

He has peer-reviewed as referee many scientific papers for various international scientific journals.