

Last update: 3rd May 2019.

Born in Lovere (Bergamo), Italy, on February 29th, 1972.

#### EDUCATION:

September 1986-July 1991: Istituto Tecnico per Geometri (High School), in Darfo (Brescia) - Italy.

September 1991-July 1997: University at the Faculty of Engineering of Brescia. Graduates on July 9, 1997 in Civil Engineering.

#### POST-GRADUATION EVENTS:

November 1997-October 2000: Ph.D. student in Materials for Engineering at the Faculty of Engineering of Brescia.

January-July 1999: practical training at the software house Hibbitt, Karlsson & Sorensen, Inc. (now 3DS Dassault Systemes), Pawtucket R.I., U.S.A., where works on the development of the Finite Element code ABAQUS.

The March 2nd, 2001 obtains the Ph.D. degree in Materials for Engineering at the Faculty of Engineering of Brescia.

1st March 2002 to 20th February 2011: Assistant professor of "Scienza delle Costruzioni" (Mechanics of materials and structures) at the Department of Civil Engineering of University of Brescia.

July-September 2003 and January-March 2004: Visiting scientist at the Department of Applied Mathematics and Theoretical Physics (DAMTP) of Cambridge (UK).

21st February 2011 to date: Associate Professor of "Scienza delle Costruzioni" (Mechanics of materials and structures) at the Faculty of Engineering of the University of Brescia.

January 2014 to date: member of the Executive Committee of the Mechanics of Materials Group of the Italian Association of Theoretical and Applied Mechanics (GMA-AIMETA) (coordinator since January 2016).

May 26th 2015: Italian full professorship habilitation in "Scienza delle Costruzioni" (Solid and Structural Mechanics).

First recipient of the AIMETA Junior prize in Solid Mechanics (2009 edition), for his research on strain gradient crystal plasticity.

#### INVITED TALKS:

1) A deformation theory of strain gradient crystal plasticity for the description of the variation in strength and strain hardening with changing size.

MICROMECHANICS SEMINAR SERIES & WORKSHOPS, Department of Engineering, University of Cambridge (UK), 18 November 2005.

2) Polycrystal Plasticity: size effects and strain gradient modelling. Department of Engineering, University of Ferrara, 16 March 2007.

3) Size effects and strain gradient plasticity: how many length scales should be involved in the modelling? Departamento de Ciencia de Materiales, Universidad Politécnica de Madrid, 3 March 2009.

4) Modelling the size effects of polycrystals by means of strain gradient plasticity. Department of Structural Engineering, Politecnico di Milano, 13 November 2009.

5) Studies of small-scale plasticity. Danish Center for Applied Mathematics and Mechanics, Technical University of Denmark, 7 April 2011.

6) Studies of small-scale plasticity. Dipartimento di Ingegneria Civile, Chimica e Ambientale, Università degli Studi di Genova, 6 March 2014.

7) Crystal and phenomenological distortion-gradient plasticity theories. Dipartimento di Ingegneria Civile e Architettura, Università degli Studi di Pavia, 11 September 2014.

8) Modelling the torsion of thin metal wires by distortion gradient plasticity. Federation Francilienne de Mecanique, Seminaire Ile-de-France, Ecole Nationale Supérieure d'Arts et Metiers ParisTech (ENSAM), 15 January 2015.

9) Modelling the torsion of thin metal wires by distortion gradient plasticity. Danish Center for Applied Mathematics and Mechanics, Technical University of Denmark, 26 May 2015.

10) Studies of micron scale size effects in metals through higher-order gradient plasticity based on plastic distortion incompatibility. Dipartimento di Ingegneria e Architettura, Universita' degli Studi di Parma, 27 March 2019.

#### MEMBER OF SCIENTIFIC COMMITTEES:

1) XX Italian Congress on Computational Mechanics (GIMC) and VII Italian Congress on Mechanics of Materials (GMA), Cassino, 11-13 June 2014.

2) XXI Italian Congress on Computational Mechanics (GIMC) and VIII Italian Congress on Mechanics of Materials (GMA), Lucca, 27-29 June 2016.

3) IUTAM symposium "Size-effects in Microstructure and Damage Evolution", Copenhagen, 27 May-1 June 2018.

4) XXII Italian Congress on Computational Mechanics (GIMC) and IX Italian Congress on Mechanics of Materials (GMA), Ferrara, 13-14 September 2018.

5) XXIV Congress of the Italian Association of Theoretical and Applied Mechanics (AIMETA), Roma, 15-19 September 2019.

REFEREE ACTIVITY. Is referee for 47 international journals, as specified at the URL <https://publons.com/author/359731/lorenzo-bardella/#profile>

#### EDITORIAL ACTIVITY:

1) Article Editor for SAGE Open.

2) Guest Editor-in-Chief of the Special Issue for Materials: "Syntactic Foams: Microstructural Characterisation and Effective Properties".

3) With professors Marco Paggi and Pasquale Vena, Guest Editor-in-Chief of the Special Issue for Meccanica: "Recent Advances on the Mechanics of Materials".

4) Review Editor for Frontiers in Mechanics of Materials.

#### INVOLVED IN THE FOLLOWING GRANTED RESEARCH PROJECTS:

1) Research Training Network "Deformation and fracture instabilities in novel materials and processes" (contract number HPRN-CT-2002-00198). European Coordinator: prof. Elias C. Aifantis. Local scientific coordinator (Cambridge, UK): prof. Norman A. Fleck.

2) Italian project PRIN 2007: "Modelling and analysis of nonlinear structures". National scientific coordinator: prof. Raffaele Casciaro. Local Scientific coordinator: prof. Nicola Luigi Rizzi.

3) Integrated Action Italy-Spain 2009-2010: "Modelling the size effects in metals at the nano/microscale by combining strain gradient crystal plasticity and discrete dislocation dynamics". Italian coordinator: prof. Angelo Carini. Spain coordinator: prof. Javier Segurado, Universidad Politecnica de Madrid E.T.S. Ingenieros de Caminos.

4) 2014--16, with professors Nikhil Gupta and Maurizio Porfiri (Tandon School of Engineering, New York University) is principal investigator of the project "Understanding the failure of syntactic foams under hydrostatic pressure" granted with 20000 dollars by CMT Materials, Attleboro (MA), USA.

#### INTERNATIONAL TEACHING:

14-18 May 2018: with professors Albrecht Bertram, Samuel Forest, Wolfgang Mueller, Christian Niordson, and Pierre Seppecher is a teacher at CISM (International Centre for Mechanical Sciences), Udine (Italy) of the advanced school "Mechanics of Strain Gradient Materials".

#### TEACHING EXPERIENCE (the Faculty of Engineering of Brescia):

2000-2001: seminars on "Linear Elastic Homogenization of Composite Media" and "Integration of the elastic-plastic incremental constitutive equations".

2002/03 to 2010/11: tutorials and lectures of "Scienza delle Costruzioni" (Solid

and Structural Mechanics).

2002/03 to 2008/09 and 2010/11: professor of "Elementi Strutturali A" (Strength of Materials).

2009/10: professor of "Finite Elements".

2010/11: professor of "Elementi Strutturali B" (Limit Analysis of Structures).

2010/11 and 2016/17: professor of "Mechanics of Composite Materials" for the PhD class in Mathematical Methods and Models for Engineering.

2011/12 to date: professor of "Scienza delle Costruzioni" (Solid and Structural Mechanics).

2012/13: professor of "Calcolo Anelastico" (Computational Inelasticity).

2018/19 to date: professor of "Complementi di Scienza delle Costruzioni" (Advanced Solid and Structural Mechanics).

Advisor of 2 PhD theses (under way) and 32 theses in Engineering (bachelor and master degrees).