

CURRICULUM VITAE of DANIELE BARALDI

CURRENT ACADEMIC POSITION

Associate professor of Structural Mechanics – ICAR/08, Department of Architecture and Arts, Università IUAV di Venezia, Italy.

PAST ACADEMIC POSITIONS/FELLOWSIPS

- 2017-2020 Assistant professor of ‘Structural Mechanics’ – ICAR/08 (senior fixed term assistant professor).
Department of Architecture, Construction, Conservation, Università IUAV di Venezia, Italy.
- 2017 Adjunct professor of ‘Structural Mechanics’ – ICAR/08, Department of Architecture, Construction, Conservation, Università IUAV di Venezia, Italy (from 01/2017 to 06/2017).
- 2017 Scholarship researcher, Department of Architecture, Construction, Conservation, Università IUAV di Venezia, Italy (from 03/2017 to 06/2017).
- 2013-2016 Assistant professor of ‘Structural Mechanics’ – ICAR/08 (junior fixed term assistant professor).
Department of Architecture, Construction, Conservation, Università IUAV di Venezia, Italy.
- 2013 Research fellow, Department of Architecture, Construction, Conservation, Università IUAV di Venezia, Italy.
- 2010-2013 Ph.D. student, University of Ferrara, Engineering Department, Italy.

EDUCATION

- 2010-2013 PhD in Engineering Science, XXV cycle, with a thesis entitled ‘Nonlinear analysis of structures on elastic half-space by a FE-BIE approach’.
University of Ferrara, Engineering Department, Italy.
PhD Supervisor Prof. Nerio Tullini.
- 2006-2009 Master degree in Civil Engineering, University of Ferrara, Faculty of Civil Engineering, Italy.
- 2003-2006 Bachelor degree in Civil and Environmental Engineering, University of Ferrara, Faculty of Civil Engineering, Italy.

TEACHING ACTIVITIES

- Department of Architecture and Arts, Università IUAV di Venezia, Italy

- 2020-2021 Professor of ‘Structural Mechanics’ (ICAR/08), bachelor degree ‘Architettura’.
- 2019-2021 Professor of ‘Structural Design’ (ICAR/09) module into the ‘2nd design laboratory’, bachelor degree ‘Architettura Costruzione Conservazione’.

- Department of Architecture, Construction, Conservation, Università IUAV di Venezia, Italy

- 2018-2019 Assistant professor of ‘Structural Design’ (ICAR/09) module into the ‘2nd design laboratory’, master degree ‘Architettura per il nuovo e per l’antico’.

- 2016-2018 Assistant professor of ‘Structural Mechanics 2’ (ICAR/08), bachelor degree ‘Architettura Costruzione Conservazione’.
- 2016-2017 Assistant professor of ‘Structural Mechanics’ (ICAR/08) module into the ‘2nd design laboratory’, master degree ‘Architettura per il nuovo e per l’antico’.
- 2014-2015 Assistant professor of ‘Structural Design’ (ICAR/09) module into the ‘3rd design laboratory’, master degree ‘Architettura per il nuovo e per l’antico’.
- 2013-2015 Assistant professor of ‘Mechanics of historical structures’ (ICAR/08), master degree ‘Architettura per il nuovo e per l’antico’.

- 2013-2018 Teaching assistant of ‘Structural Mechanics 1’ and ‘Structural Mechanics 2’ (ICAR/08) courses, bachelor degree ‘Architettura Costruzione Conservazione’.

- Engineering and Architecture departments, University of Ferrara, Italy:

- 2011-2012 Teaching assistant of ‘Structural Design’ (ICAR/09) course, master degree in Architecture.
- 2010-2012 Teaching assistant of ‘Structural Design 2’ and ‘Reinforced Concrete and Precast Reinforced Concrete Structures’ (ICAR/09) course, bachelor and master degrees in Civil Engineering.

- Supervision of graduate students

- 2020-present Co-supervisor of four master students, Università IUAV di Venezia, Department of Architecture and Arts.
- 2017-2019 Co-supervisor of six master students, Università IUAV di Venezia, Department of Architecture, Construction, Conservation.
- 2015 Co-supervisor of one master student, University of Ferrara, Engineering Department.

COMMITTEES AND PROFESSIONAL ACTIVITIES

- 2019-present member of the Scientific Committee of ‘LabSCo’, University Laboratory of Strength of Materials, Università Iuav di Venezia

INSTITUTIONAL RESPONSABILITIES (Università IUAV di Venezia, Italy).

- 2014-present Faculty member.
- 2014-present Member of several admission committees for granted post-doc research fellowships.
- 2014-2016 Member of the admission committee for the evaluation of Italian language of foreign students.
- 2014-2017 Member of the final exam commission for the bachelor degree.
- 2016 Member of the admission committee of the PhD program jointly supervised by Università IUAV di Venezia and Curtin University of Technology of Perth (Western Australia).
- 2017 Member of the commission for the evaluation of teaching assistant candidates for the Department of Architecture Construction and Conservation courses.
- 2017-present Member of the commission for the final evaluation of post-doc research fellow activities.

SCIENTIFIC PRIZES/ACHIEVEMENTS

- VQR 2011-2014, (Italian) evaluation of research quality: excellent evaluation for the research paper 'Continuous and discrete models for masonry like material: a critical comparative study'.

COLLABORATIONS

Collaboration with Prof. G. Milani, Technical University of Milan, Department of Architecture, Structural Engineering and Built environment.

Collaboration with Prof. V. Sarhosis, Newcastle University, School of Engineering.

Collaboration with Prof. A. Tralli, University of Ferrara, Engineering Department.

Collaboration with Prof. N. Tullini, University of Ferrara, Engineering Department.

Collaboration with A. Cazzani, University of Cagliari, Department of Civil and Environmental Engineering and Architecture.

Collaboration with Dr. E. Reccia, University of Rome 'Sapienza', Department of Structural and Geotechnical Engineering'.

BRIEF DESCRIPTION OF RESEARCH ACTIVITIES

Recent research activity is dedicated to theoretical, numerical and experimental assessment of masonry structural behaviour at different scales. Other research activities are dedicated to the development of numerical models for studying laminated glass beams and for studying the interaction between structures and elastic supports.

Selected research activities:

- Analysis of masonry structures by means of discrete element models and by means of homogenisation/identification procedures of standard or higher order continua. Analyses are carried on in linear and non-linear fields, in static and dynamic fields.
- Analysis of masonry structures by means of experimental campaigns characterized by laboratory tests on masonry walls for the determination of mechanical parameters, also accounting for strengthening techniques.
- Analysis of masonry historical buildings by means of low-cost structural identification techniques.
- Analysis of laminated glass beams in elastic and inelastic fields by means of discrete or continuous (beam, plate) models.
- Analysis of structures on elastic supports, numerical assessment of soil-structure-interaction.
- Analysis of reinforced concrete and precast reinforced concrete structures and structural elements.

Author of several publications on international journals, dedicated to modelling and analysis of masonry structures by means of theoretical and numerical models and dedicated to soil-structure interaction problems. Author of several contributions to national and international conferences dedicated to modelling and analysis of masonry structures, structural mechanics, structural and seismic engineering.

Participation to research projects/teams:

- IUAV research group 'Clusterlab EDA – Experimental Design Approach for buildings and sensitive and crisis areas'.
- ReLUIS 2017 (Rete dei Laboratori Universitari di Ingegneria Sismica – Network of Seismic Engineering University Laboratories), member of IUAV research unit, coordinated by Professors A. Saetta and P. Faccio, thematic area 1 – masonry structures.

- PRIN 2015, member of IUAV research unit in national research project ‘Advanced mechanical modeling of new materials and structures for the solution of 2020 Horizon challenges’; national coordinator Prof. M. Di Paola.
- PRIN 2010-11, member of IUAV research unit in national research project ‘Models and algorithms for the non-linear analysis of structures and the validation of performance-based design rules’; national coordinator Prof. R. Casciaro.
- PRIN 2008, member of University of Ferrara research unit in national research project ‘Innovative structures by means of pultruded profiles (FRP): from modelling and analysis to design, development and durability control’; national coordinator Prof. P. Bisegna.

Editorial/peer review activities:

2018–present: Academic editor of ‘Advances in Civil Engineering’ (ISSN 1687-8086)

2019–present: Editorial board member of ‘Civil Engineering Journal’ (ISSN 2476-3055)

2018: Guest editor for ‘Shock and Vibration’ (ISSN 1070-9622) international journal, special issue on ‘Structural Health Monitoring through Vibration-Based Approaches’.

Reviewer for the following international journals:

Bulletin of Earthquake Engineering, Composite Structures, Computer Methods in Applied Mechanics and Engineering, Computers & Structures, Construction and Building Materials, Engineering Structures, Frattura ed Integrità Strutturale, Journal of Building Engineering, Journal of Engineering Mechanics (ASCE), International Journal of Architectural Heritage, Meccanica.

Reviewer of several chapters of the book ‘Computational Modeling of Masonry Structures Using the Discrete Element Method’, IGI Global 2016, edited by G. Milani, K. Bagi, V. Sarhosis.

Member of the scientific committee and reviewer of the conferences: MuRiCo5 (2017), MuRiCo6 (2019), MuRiCo7 (2021) - Mechanics of Masonry Structures Strengthened with Composite Materials.