

University Academic Curriculum Vitae

Personal information

Name: Roberto Belotti
Place and date of birth: Bergamo – 30/06/1987
Nationality: Italian

Education since leaving school

- Doctor of Philosophy in Mechatronics and Product Innovation Engineering (2017); Università degli Studi di Padova. Thesis title: "Eigenstructure assignment in vibrating systems through active and passive approaches". Supervisor: prof. Dario Richiedei
- Tirocinio Formativo Attivo: professional license for high school teaching of Mathematics and Physics (2013); Università Cattolica del Sacro Cuore, Brescia.
- Visiting student at the University of Toledo, Ohio (U.S.A.) (Jan. 2011 – Apr. 2011).
- Master of Science in Mathematics (2012); Università degli Studi di Milano – Bicocca
Thesis title: Dynamical systems and algorithms in linear algebra. Advisors: prof. Alessandro Arsie and prof. Paolo Lorenzoni.
- Bachelor of Science in Mathematics (2009); Università degli Studi di Milano – Bicocca
Thesis title (in Italian): La riduzione di Dirac. Advisor: prof. Paolo Lorenzoni.

Present appointment

- 01/09/2017 – present. Research Fellow on a fixed-term contract (RTD) at the Free University of Bozen-Bolzano.

Professional experience

- 01/01/2017 – 31/08/2017. Postdoctoral researcher at the Università degli Studi di Padova.

Experience in academic teaching

- ***Teaching in undergraduate courses***
 - Academic year 2014/2015: Teaching Assistant for the course "Analisi Matematica I" at the Università degli Studi di Padova, Bachelor's programs in "Mechanic and mechatronic engineering" and "Engineering and management" (50 hours)
 - Academic year 2015/2016: Teaching Assistant for the course "Analisi Matematica I" at the Università degli Studi di Padova,

Bachelor's programs in "Mechanic and mechatronic engineering" and "Engineering and management" (40 hours)

- ***Teaching in professional courses supported by the University of Padua***

Teacher at the biennial program "Tecnico superiore per l'automazione ed i sistemi meccatronici" organized by I.T.S. Meccatronico, Fondazione Istituto Tecnico Superiore, Nuove Tecnologie per il Made in Italy - Comparto Meccatronico, for school years 2014/15 (24 hours), 2015/16 (32 hours) and 2016/17 (40 hours). The program is organized and delivered by the I.T.S. foundation involving the University of Padova.

International experience

Honorary research assistant at the University of Liverpool (UK) (Apr. 2016 – Jul. 2016).
Collaboration with prof. Huajiang Ouyang.

Publications

Papers in refereed academic journals

- [1] Belotti, R., Richiedei, D. and Trevisani, A. (2016). Optimal Design of Vibrating Systems Through Partial Eigenstructure Assignment. *Journal of Mechanical Design*, 138(7), 071402. doi: 10.1115/1.4033505
- [2] Belotti, R. and Richiedei, D. (2017). Designing auxiliary systems for the inverse eigenstructure assignment in vibrating systems. *Archive of Applied Mechanics*, 87(2), 171–182. doi: 10.1007/s00419-016-1185-x
- [3] Belotti, R., Ouyang, H. and Richiedei, D. (2018). A new method of passive modifications for partial frequency assignment of general structures. *Mechanical Systems and Signal Processing*, 99, 586-599. doi: 10.1016/j.ymsp.2017.06.043

Papers published in conference proceedings

- [4] Belotti, R., Palomba, I., Richiedei, D. and Trevisani, A. (2015). Interior mode selection in the Craig Bampton reduction technique based on an energy approach. 6th International Operational Modal Analysis Conference (IOMAC 2015), May 12-14, 2015, Gijón, Spain.
- [5] Belotti, R., Palomba, I., Richiedei, D. and Trevisani, A. (2015). A new method for passive partial eigenstructure assignment in vibrating systems. 6th International Operational Modal Analysis Conference (IOMAC 2015), May 12-14, 2015, Gijón, Spain.
- [6] Belotti, R., Palomba, I., Richiedei, D. and Trevisani, A. (2015). Partial eigenstructure assignment in vibrating systems through homotopy optimization. International Conference on Engineering Vibration (ICoEV 2015), September 7-10, 2015, Ljubljana, Slovenia.
- [7] Belotti, R. and Richiedei, D. (2016). Improving active eigenvector assignment through passive modifications. International Conference on Motion and Vibration Control (MoViC 2016), July 3-6, 2016, Southampton, United Kingdom. Published in: *Journal of Physics: Conference Series* (Vol. 744, p. 12050). IOP Publishing. doi: 10.1088/1742-6596/744/1/012050

- [8] Belotti, R., Caneva, G., Palomba, I., Richiedei, D. and Trevisani, A. (2016). Model updating in flexible-link multibody systems. International Conference on Motion and Vibration Control (MoViC 2016), July 3-6, 2016, Southampton, United Kingdom. Published in: Journal of Physics: Conference Series (Vol. 744, p. 12073). IOP Publishing. doi: 10.1088/1742-6596/744/1/012073
- [9] Belotti, R., Richiedei, D. and Trevisani, A. (2017). Concurrent synthesis of active control and structural modifications for eigenstructure assignment on a cantilever beam. International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC/CIE 2017), August 6-9, 2017, Cleveland, Ohio, USA.

Book chapters

- [10] Belotti, R., Caracciolo, R. and Richiedei, D. (2017). Concurrent Active Control and Dynamic Structural Modification in the Design and the Optimization of Vibrating Systems. International Conference of IFToMM Italy (IFIT 2016), December 1-2, 2016, Vicenza, Italy. Published in: Advances in Italian Mechanism Science (pp. 475–482). Springer International Publishing. doi: 10.1007/978-3-319-48375-7_51

Doctoral dissertation

- [11] Belotti, R. (2017). Eigenstructure assignment in vibrating systems through active and passive approaches.

Further data

Selected speaker at the following scientific conferences over the last 3 years:

- 6th International Operational Modal Analysis Conference (IOMAC 2015), May 12-14, 2015, Gijón, Spain.
- 13th International Conference on Motion and Vibration Control (MoViC 2016), July 3-6, 2016, Southampton, United Kingdom.
- 1st International Conference of IFToMM Italy (IFIT 2016), December 1-2, 2016, Vicenza, Italy.

Language competence

Italian: mother tongue
English: fluent