



Mario Baggetta

📍 DIME - Dept. of Mechanical, Energy, Management and Transportation Engineering, University of Genova, Italy

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Born 30 August 1992

WORK EXPERIENCE

Nov. 2020 – present

Research Assistant - PhD candidate

University of Genova, DIME, Genova, Italy

• Research Topics:

- Underactuated robotic hands
- Analysis/design/optimization of compliant mechanisms and flexible components
- Structural optimizations
- Applications: human-like compliant joints, variable stiffness actuators

• Teaching Activity:

- Member of the examination board for "Mechanics of Machines" (BSc in Mechanical Engineering) and "Technical Drawing" (BSc in Naval Architecture and Marine Engineering, BSc in Nautical Engineering)

Jun. 2019 – Oct. 2020

Research Fellow

University of Genova, DIME, Genova, Italy

• Research Topics:

- Multi-Flexible body dynamics
- Non-linear FEA
- Mechatronics Systems control

• Consulting Activity for Ansaldo Energia:

- Factory 4.0
- Advanced simulation of assembly operations
- FEA simulation of heavy lifting operations

EDUCATION

Nov. 2020 – present

PhD in Mechanical Engineering

University of Genova, DIME, Genova, Italy

- Supervisors: Prof. Giovanni Berselli

Sept. 2016 – Mar. 2019

MSc in Mechanical Engineering

University of Genova, DIME, Genova, Italy

- Scored: 109/110

Sept. 2011 – Dec. 2016

BSc in Mechanical Engineering

University of Genova, DIME, Genova, Italy

- Scored: 90/110

PERSONAL SKILLS

Languages

- Italian: Mother tongue
- English: Professional Knowledge

TECHNICAL SKILLS

Operating System	<ul style="list-style-type: none"> • Windows: Office Package, Adobe Illustrator, Latex
Programming Languages	<ul style="list-style-type: none"> • Matlab • Labview
Computer Aided Design	<ul style="list-style-type: none"> • PTC Creo • Solidworks (Certified Associate - C-8KSNEK4ETG) • NX
Multibody Dynamics	<ul style="list-style-type: none"> • RecurDyn • Simulink
Finite Element Analysis	<ul style="list-style-type: none"> • ANSYS Workbench

PROJECTS

Jun. 2019 – present

Lighthouse Plant

Ansaldo Energia, Genova, Italy

- Main activities: Advanced simulation of assembly and manipulation operations in Factory 4.0.
- Budget: 14 m€

REVIEWER ACTIVITY

Reviewer for the journals:

- Transactions on Mechatronics (IEEE)

Reviewer for the conferences:

- IEEE BioRob - International Conference on Biomedical Robotics and Biomechatronics

PUBLICATIONS

Journal Papers:

- J1:** Bilancia, P., **Baggetta, M.**, Hao, G., Berselli, G. "A variable section beams based Bi-BCM formulation for the kinetostatic analysis of cross-axis flexural pivots". International Journal of Mechanical Sciences, (UNDER REVIEW)
- J2:** Bilancia, P., **Baggetta, M.**, Berselli, G., Bruzzone, L., Fanghella, P. "Design of a Bio-Inspired Contact-Aided Compliant Wrist". Robotics and Computer-Integrated Manufacturing, 2021, 67, 102028.
- J3:** Bruzzone, L., **Baggetta, M.**, Nodehi, S.E., Bilancia, P., Fanghella, P. "Functional design of a hybrid leg-wheel-track ground mobile robot". Machines, 2021, 9(1), pp.1-11, 10.
- J4:** Bruzzone, L., Fanghella, P., **Baggetta, M.**. "Experimental assesment of fractional-order pdd1/2 control of a brushless motor with inertial load". Actuators, 2020, 9(1), 13.

Posters & Workshops:

- PW1:** **Baggetta, M.**, Bilancia, P., Berselli, G., Bruzzone, L., Fanghella, P., (2020). CAE-based design of a cable driven human-like robotic wrist. International CAE Conference.