

# Debora Zrinscak

Experienced in soft robotic technologies and EU-funded project management.

## Contacts

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### Web

[linkedin.com/in/deborazrinscak/](https://www.linkedin.com/in/deborazrinscak/)

## Soft Skills

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- Creative problem-solving
- Time Management
- Team-work Management
- Presentation Skills
- Tutoring and Teaching
- Motivation

## Hard Skills

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- Text: Office, Latex
- CAD: Autodesk Inventor, Dassault Systems Solidworks
- Programming: C, Matlab
- Additive Manufacturing
- Laser cutting
- Polymer casting

## Language Skills

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- Italian, mother tongue
- Croatian, mother tongue
- English, B2 FCE grade B
- French, B1 DELF
- Japanese, A1 Naganuma Japanese Language School

## Experience

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### 07/2022 - present

The BioRobotics Institute

#### Post-Doctoral Researcher

##### HybridHeart Project

Responsible for managing the HybridHeart project deliverables, deadlines and scientific production. Contact person for the purchase procedures within the Soft Mechatronics for Biorobotics Laboratory.

### 11/2017 - 07/2022

Ventura, California

#### Chair - Gordon Research Seminar on Robotics

##### Gordon Research Conferences

Involved in the organization of a seminar addressed to young researchers, both in terms of attendees' management and main conference programme definition.

### 10/2018 - 07/2022

The BioRobotics Institute

#### EU-Project Scientific Output Management

##### HybridHeart Project

Leader of a small research team: in charge of the design, manufacturing and testing of a soft robotics artificial heart pump. Responsible for managing the scientific documentation, deliverables, presentations, deadlines and resources.

### 10/2018 - 07/2022

The BioRobotics Institute

#### Teaching Assistance and Students' Mentorship

##### Soft Mechatronics for Biorobotics Laboratory

Organizer of laboratory activities for MSc students to demonstrate the use of soft robotic actuating technologies 15 hours/semester. Responsible for master thesis and PhD students' workflow, in terms of research organization and results valorisation

### 01/2017 - 08/2017

Atsugi-shi, Kanagawa, Japan

#### Research&Development Internship

##### NTT Communication Science Laboratories

Study of Human-Robot Interaction through a telepresence system, analysing head movements of participants.

## Patents

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Zrinscak, D., Lorenzon L., Maselli M., Cianchetti M., (2020). Artificial Heart Muscle. Ufficio Italiano Brevetti e Marchi N. 102020000015208, WIPO Patent Application WO/2021/260614

## Awards

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Vulcanus EU/JP Project: Scholarship winner, value 1.900.000¥ (2016).  
One year in Japan: to learn Japanese (4 months) and work for 8 months in a company.



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## Education

- 10/2018 - 07/2022** ● **The Biorobotics Institute, Scuola Superiore Sant'Anna**  
Pontedera (PI), Italy  
PhD cum Laude  
Thesis: Towards a biomimetic soft robotic total artificial heart
- 09/2017 - 09/2018** ● **The Biorobotics Institute, Scuola Superiore Sant'Anna**  
Pontedera (PI), Italy  
Master Thesis Student
- 08/2016 - 08/2017** ● **EU/JP Programme Vulcanus Student**  
Tokyo, Japan  
Naganuma Tokyo School of Japanese Language - NTT Communication Science Laboratories  
Industrial Report: Social Robotics: The future is here
- 09/2014 - 09/2018** ● **Politecnico di Torino, Mechatronic Engineering**  
Torino (TO), Italy  
Master Degree, 110/110  
Thesis: Study and design of a bioinspired actuation system for a soft robotic total artificial heart
- 09/2011 - 09/2014** ● **Università di Pavia, Industrial Engineering**  
Pavia (PV), Italy  
Bachelor Degree, 107/110  
Thesis: Realization and automatic control of a path-following vehicle realized with Lego Mindstorm

## Conferences

- 14-19/08/2022** ● **Gordon Research Conference on Robotics**  
Ventura, California, USA  
Poster presenter
- 14-18/04/2019** ● **RoboSoft, IEEE-RAS International Conference on Soft Robotics**  
Seoul, Korea  
Poster presenter
- 25-27/06/2018** ● **GNB, GNB VI National Congress of Bioengineering**  
Milan, Italy  
Poster presenter
- 24-28/04/2018** ● **RoboSoft, the First IEEE-RAS International Conference on Soft Robotics**  
Livorno, Italy  
Volunteer

## Publications

- Zrinscak D., De Chirico C., Coluccia F., De Luca M., Lorenzon L., Maselli M., Overvelde J.T.B., Cianchetti M., *A soft robotic cardiac wall* (2023), *Advanced Healthcare Materials*, Wiley-VCH GmbH, In preparation
- Zrinscak D., Lorenzon L., Maselli M., Cianchetti M. (2023), *Soft robotics for physical simulators, artificial organs and implantable assistive devices*, (2023), *Progress in Biomedical Engineering*, IOPscience
- Bosio C., Zrinscak D., Laschi C., Cianchetti M., *Towards resilient fluidically-actuated robots: the soft mini fuse valve* (2022), *Robotics and Automation Letters*, IEEE Robotics & Automation Society. Under revision
- Lorenzon L., Costi L., Lucantonio A., Arleo L., Zrinscak D., Cianchetti M., *Harnessing mechanical instabilities in the development of an efficient soft pump for an artificial heart ventricle simulator*, (2022), *Soft Robotics*, Mary Ann Liebert Inc. and Publishers, Under revision
- Lorenzon L., Zrinscak D., Maselli M., Cianchetti M., *Modelling and characterization of a Soft Inverse Pneumatic Artificial Muscle*, (2021) ACTUATOR, International Conference and Exhibition on New Actuator Systems and Applications 2021
- Bondi G., Zrinscak D., Cianchetti M., *Design and development of an origami-based pump for soft robotics wearable applications*, (2020) GNB VII National Congress of Bioengineering
- Magliola V., Zrinscak D., Maselli M., Cianchetti M., *A piezoresistive flexible sensor to detect soft actuator deformation*, (2019) Robosoft International Conference 2019
- D'Accolti D., Zrinscak D., Manti M., Cianchetti M., *Preliminary study on a magnetically driven soft robotic total artificial heart*, (2018) GNB VI National Congress of Bioengineering.