

## CANDIDATURA COMITATO ESECUTIVO ESB-ITA

### PERSONAL INFORMATION

Name and surname: **Giulia Luraghi**

Date of birth: 10<sup>th</sup> March 1991      Nationality: Italian

URL for web site: <https://www.cmic.polimi.it/en/persona/docenti-e-ricercatori/luraghi-giulia/>

### CURRENT POSITIONS

- 2025 – now      **Associate professor**, Dept. of Chemistry, Materials and Chemical Engineering, Politecnico di Milano, Milan, Italy.
- 2024 – now      **Co-founder and Scientific Advisor**, AllStent s.r.l. (<https://www.allstent.com/>).
- 2020 – now      **Affiliated Research Fellow**, Dept. of Biomechanical Engineering, Delft University of Technology, Delft, Netherlands.

### PROPOSTE DI INIZIATIVE FUTURE IN AMBITO ESB-ITA

In continuità con il precedente mandato, continuerò a coordinare il Gruppo di Lavoro sulla Comunicazione, promuovendo:

- ✓ L'organizzazione di seminari online a cadenza mensile per la presentazione dei diversi gruppi di ricerca e di tool trasversali;
- ✓ L'aggiornamento e la manutenzione del sito ESB-ITA;
- ✓ La presenza sui social, in particolare su LinkedIn.

In collaborazione con gli altri Gruppi di Lavoro, mi impegno a organizzare iniziative volte a:

- ✓ Supportare i giovani ricercatori nella loro carriera accademica (con il Gruppo Mentoring);
- ✓ Promuovere collaborazioni nazionali tra realtà accademiche, aziende, startup e istituti di ricerca ospedalieri (con il Gruppo Networking).
- ✓

### PROCEDENTI ATTIVITÀ CONDOTTE IN AMBITO ESB E/O ESB-ITA

- ✓ **Membro del Comitato Esecutivo 2023-2025;**
- ✓ **Responsabile del Gruppo di Lavoro sulla Comunicazione;**
- ✓ **Membro del Comitato scientifico dei meeting annuali ESB-ITA di Pescara 2024 e di Palermo 2025;**
- ✓ **Mentor durante evento di mentoring organizzato durante il meeting ESB-ITA di Pescara 2024;**
- ✓ **Membro del comitato scientifico e track chair della sessione intitolata “TR02 Cardiovascular Mechanics” al congresso ESB di Milano 2021;**
- ✓ **Membro del comitato organizzatore del congresso ESB di Milano 2021. In particolare ho svolto il ruolo di Conference-portal management leader, organizzando l'architettura della piattaforma online del congresso;**
- ✓ **Social Media Manager per ESB-ITA dal 2018 al 2023**
- ✓ **Membro ESB e ESB-ITA dal 2017**

### EDUCATION

- 2019      **Ph.D in Bioengineering cum laude**, Politecnico di Milano, Milan, Italy;
- 2016      **MSc. in Biomedical Engineering cum laude**, Politecnico di Milano, Milan, Italy.

### PREVIOUS POSITIONS

- 2023 – 2025      **Tenure-track Assistant professor**, Dept. of Chemistry, Materials and Chemical Engineering, Politecnico di Milano, Milan, Italy.
- 2019 – 2021      **Post-Doc Research Fellow**, Dept. of Chemistry, Materials and Chemical Engineering, Politecnico di Milano, Milan, Italy.
- 2018      **Visiting Research Fellow (during the PhD)**, College of Engineering, Swansea University, Swansea, UK.

### FELLOWSHIPS AND AWARDS

2024	Winner of the <b>ESB Early Career Researcher Award</b> , European Society of Biomechanics (ESB).
2023	Selected to attend the research training and networking program <b>European Talent Academy 2023</b> on the interdisciplinary topic “Health”.
2021	Winner of 1-year-post-doc <b>fellowship of €35,010</b> titled “Reduced-order and fluid-structure interaction models to study patient-specific cardiovascular diseases”, Politecnico di Milano, Milan, Italy.
2020	Winner of the <b>Mimics Innovation Suite Award for the best non-clinical research paper</b> “Luraghi et al., Journal of Biomechanics, 2019”, Materialise, Belgium.
2020	Winner of the <b>Best PhD thesis</b> , Bioengineering National Group, Italy.
2019	Winner of 2-year-post-doc <b>fellowship of €56,992</b> titled “Computational model to study ischemic stroke treatments”, Politecnico di Milano, Milan, Italy.
2019	Winner of the <b>Best Thematic Presentation for an in silico model for industrial translation</b> titled “Insights into patient-specific models of the thrombectomy procedure”, Italian chapter of the European Society of Biomechanics.
2018	Winner of the <b>Best VPHi Student Award for the oral presentation</b> titled “A patient-specific fluid-structure interaction analysis of TAVI procedure”, Virtual Physiological Human (VPH) society.
2017	Winner of the <b>Best Poster Award</b> titled “FSI Model of a Polymeric Aortic Valve: Comparison With Experimental Results And Simulation In A Patient-Specific Aortic Root”, Virtual Physiological Human (VPH) society.
2016	Winner of the <b>Best Master thesis</b> , Bioengineering National Group, Italy.
2016	Winner of three-year-doctoral <b>fellowship of €80,000</b> , Italian Ministry of University and Research.

#### COMPETITIVE RESEARCH AWARDS WON

2024 - 2029	<b>PI</b> of the project “PROTEGO: Prognostic assessment of valvular aortic disease treatment coupling Immunological and biomechanical profiles”. European Research Council, call <b>ERC-2024-STG</b> for <b>€1,500,000</b> .
2023 - 2028	<b>Unit PI</b> of the project “Towards GEMINI: A Generation of Multi-scale Digital Twins of Ischaemic and Haemorrhagic Stroke Patients”. European Union’s Horizon 2023, call <b>HORIZON-HLTH-2023-TOOL-05-03</b> for €13,023,000 ( <b>€587,500</b> @Politecnico di Milano).

#### SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

Ongoing	3 post-doc fellows, 5 PhD students, 9 MSc students
Past	2 post-doc fellows, 4 PhD students, 43 MSc students

#### TEACHING ACTIVITIES

From 2024	Lecturer of “3D modeling of biomedical devices and biological structures”, BSc. in Biomedical Engineering, Politecnico di Milano, Italy (5 ECTS, about 110 students)
From 2022	Lecturer of “Thermodynamics and heat transfer”, BSc. in Biomedical Engineering, Politecnico di Milano, Italy (5 ECTS, about 130 students)
From 2022	Lecturer of “Advanced Modeling in Biomechanics”, Bioengineering PhD, Politecnico di Milano, Italy (5 ECTS, about 10 students)
2017-2022	Teaching assistant of “Computational Biomechanics Laboratory”, Biomedical Engineering MSc, Politecnico di Milano, Italy (5 ECTS, about 40 students)
2016-2022	Teaching assistant of “Continuum and Structural Mechanics” in Biomedical Engineering BSc, Politecnico di Milano, Italy (5 ECTS, about 200 students).

#### ORGANIZATION OF SCIENTIFIC MEETINGS

2025	<b>Scientific Committee</b> and organizer of a <b>mini-symposium</b> “Italo-German meeting on in silico medicine: common problems and last advancements”, XI International Conference on Computational Bioengineering, Rome, Italy.
2025	<b>Scientific Committee</b> and organizer of a <b>mini-symposium</b> “Mechanics of Biomaterials: from implant to Tissue Engineering”, 12 <sup>th</sup> European Solid Mechanics Conference, Lyon, France.
2025	<b>Scientific Committee</b> , XIV meeting of the Italian chapter of the European Society of Biomechanics, Palermo, Italy.
2024	<b>Scientific Committee</b> , XIII meeting of the Italian chapter of the European Society of Biomechanics, Pescara, Italy.

2021 **Organising and Scientific Committee** as Conference-portal management chair and “Cardiovascular” **track chair**, XXVI congress of European Society of Biomechanics, online congress.

### INSTITUTIONAL RESPONSIBILITIES

2022 – now **Leader of the Cardiovascular section of the Computational Biomechanics Laboratory**, Dept. of Chemistry, Materials and Chemical Engineering, Politecnico di Milano, Italy.

### REVIEWING ACTIVITIES

2024 **Grant Evaluator**, National Science Centre Poland, Poland.

2023 – now **Grant Evaluator**, Fondazione del Monte, Italy.

2022 – now **Review editorial board member** of Frontiers in Physiology – Computational Physiology and Medicine

2021 **Co-Editor** of Journal of Biomechanics for the special issue “How can mechanics contribute improving ischemic stroke diagnostics and treatments”.

2021 **Track chair and selection of abstract** for XXVI Congress of European society of Biomechanics

2020 **Co-Editor** of Medical Engineering & Physics for the special issue “Biomechanics for in silico clinical trials”

2017 – now **Reviewer** for 17+ international peer-review journals in Biomedical Engineering

### MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2024 – now Member, Association “ERC in Italy APS”, Polytechnic of Milano Foundation, Italy

2023 – now **Executive Board member**, Italian chapter of the European Society of Biomechanics.

2020 – now **Member**, Virtual Physiological Human society.

**2017 – now Member, European Society of Biomechanics and Italian chapter of the European Society of Biomechanics**

### NATIONAL AND INTERNATIONAL CONGRESS ATTENDANCE

2024 **Keynote presentation** during the IXXX Congress of European Society of Biomechanics, Edinburgh, UK. “Validation of virtual transcatheter aortic valve implantation using in vitro and clinical data”.

2023 **Perspective presentation** during the XXVIII Congress of European Society of Biomechanics, Maastricht, Netherlands. “Towards personalized simulations as pre-planning tool for cardiovascular procedures”

2022 **Invited presentation** during the 11th European Solid Mechanics conference, Galway, Ireland. “Stent-retrievers modelling: verification, validation and applicability analysis”.

2022 **Invited presentation** during the 7th International conference on computational and Mathematical Biomedical engineering, Milan, Italy. “High-fidelity finite element simulations to model the TEVAR procedure”.

2021 **Invited presentation** during the XII European symposium on Vascular Biomaterials, Strasburg, France. “Effect of compliance mismatch on flow pattern: latest data with stent and graft”.

2020 **Keynote presentation** during the 15th international Symposium on Biomechanics in Vascular Biology and Cardiovascular Disease, Online congress. “In silico model of the thrombectomy procedure: The INSIST project”.

2016 – now **30 oral presentations** in International and national congresses.

### CAREER BREAKS

From 28-12-2022 to 28-05-2023 Maternity (first child: Edoardo 😊)

### PUBLICATION SUMMARY (as of April 2025)

Journal articles	Book Chapters	Conference presentations	Citations (Scopus)	h-index (Scopus)	Patent
50	4	36	604	14	3