
 MEng, Ph.D., Professor

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 Zürich, CH

An internationally recognised expert of human movement biomechanics, with longstanding experience in leadership and executive roles currently enjoying the challenges of industrial R&D. Highly determined in pushing the boundaries in the development and clinical translation of healthcare technologies for neurological diseases.

## PROFESSIONAL EXPERIENCE

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### Head of Research

July 2024 – present

#### Indivi

Basel, CH – <https://indivi.io>  
Medical Science

##### *Roles and responsibilities:*

- Lead Indivi's digital endpoint development strategies for its measurements of motor and cognitive functions.
- Lead the development and optimization of a Technology Readiness Levels (TRL) stage-based framework to track our progress in the maturation of endpoint 'validation' in each target COI for the context of use of augmenting drug development probability of success.
- Co-lead with the Head of Data Science the development and continuous improvement of end-to-end signal processing pipelines, feature engineering and disease and behavioral models.
- Co-lead the analyses and the communication of results, including at scientific and thematic conferences and in peer-reviewed publications.
- Co-lead the long-term regulatory strategy towards endpoint qualification and MDR certification.
- Form and foster Indivi's external alliances.

### Lead Data Scientist

Oct 2022 – May 2024

#### Biogen Digital Health

Zürich, CH - <https://www.biogen.com/science-and-innovation/biogen-digital-health.html>  
Digital Biomarkers Research and Development

##### *Roles and responsibilities:*

- Design digital outcome measurement development strategies quantifying gait and posture.
- Lead the development of end-to-end signal processing pipelines, feature engineering and disease and behavioural models for potential biomarkers/endpoints from sensor-based data.
- Lead the analyses and the communication of results, including at conferences and in peer-reviewed publications for audiences in the therapeutic area of interest, sensor science, machine learning and digital medicine.
- Study director for DigiNOA (<https://clinicaltrials.gov/study/NCT05109637>), a clinical trial to assess the Clinical Validity of Konectom™ in Adults Living With Neuromuscular Disorders.

##### *Main achievements in this role:*

- Led implementation of an innovative pipeline for the analysis of gait and posture and the internal and external dissemination of the associated results.
- Ensured timely completion of the DigiNOA study, including regulatory registration and dissemination of results, despite challenges from unexpected termination of Biogen Digital Health activities.

### Professor of Biomechanics

Jan 2019 – Aug 2022

#### The University of Sheffield

Sheffield, UK - [www.sheffield.ac.uk/mecheng](http://www.sheffield.ac.uk/mecheng)  
Department of Mechanical Engineering

##### *Roles and responsibilities:*

- Research team leader. Current team: 12 researchers, 1 project manager and 1 lab technician.
- Academic Team Leader with line management and professional development responsibilities of four academics.
- Teaching at undergraduate and postgraduate level.

##### *Main achievements in this role:*

- £5.44M of income via direct involvement in collaborative research projects.
- A solid cross-disciplinary network of academic and industrial collaborators across the UK and EU.
- Successfully supervised and trained 15\* PhD students, now all employed in both industry and academia (\*between 2013 and 2020).
- Published more than 100 scientific papers (Scopus ID 7006089519, ~ 1800 citations).
- Associate editor for the Journal of Biomechanics
- Invited as speaker or member of scientific committee by major scientific societies in the field.
- Average teaching score 3.8/4.0.

## Executive Director

Jan 2019 – Aug 2020

### Insigneo Institute for in silico Medicine

Sheffield, UK - [www.insigneo.org](http://www.insigneo.org)

*Main responsibilities (interim role):*

- Providing leadership and strategic direction for the Institute and chairing the Institute Board of Directors.
- Being in charge for the budget of the Institute and for its negotiation and overseeing the production of the annual performance report (managing of the Institute's financial officer and business development manager).
- Promoting Insigneo's brand value (managing the Institute's communication officer) both internally and externally.

*Main achievements in this role:*

- All Key Performance Indicators above target, including a saving in costs of 10% and an increase in research income of £7.1M (12% above year target).
- Simplification of the Institute's governance procedures and staff management reorganization.

## Reader in Biomechanics

Jan 2017 – Dec 2018

### The University of Sheffield

Sheffield, UK - [www.sheffield.ac.uk/mecheng](http://www.sheffield.ac.uk/mecheng)

Department of Mechanical Engineering

## Lecturer in Dynamics

Feb 2013 – Dec 2016

### The University of Sheffield

Sheffield, UK - [www.sheffield.ac.uk/mecheng](http://www.sheffield.ac.uk/mecheng)

Department of Mechanical Engineering

## "Ricercatore" in Bioengineering

Jan 2006 – Jan 2013

### Università degli studi di Roma "Foro Italico"

Rome, IT - [www.uniroma4.it](http://www.uniroma4.it)

Department of Human Movement and Sport Sciences

## LEADERSHIP ROLES IN LARGE RESEARCH PROJECTS

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Apr 2019 – Apr 2024

### Mobilise-D

*"Connecting digital mobility assessment to clinical outcomes for regulatory and clinical endorsement"*, <https://www.mobilise-d.eu/>

Funded by the Innovative Medicines Initiative 2 Joint Undertaking, European Union's Horizon 2020 and European Federation of Pharmaceutical Industries and Association. **€49M** budget, **19** academic partners, **22** industrial partners.

- Work Package leader of the Technological Development Work Package, overseeing activities from 25 contributing partners, including a multi-centric clinical trial (technical validation study).
- Member of the Executive Board, with voting rights.
- Co-chair of a Task Force for the successful deployment of the clinical validation study trial, including 13 centres and 2400 participants.
- Member of the Qualification Task Force, in charge of approval from the European Medical Agencies (EMA) and the US Food and Drug Administration (FDA).

Sep 2013 – Mar 2022

### MultiSim

*"Modelling Complex and Partially Identified Engineering Problems - Application to the Individualised Multi-Scale Simulation of the Musculoskeletal System"* *"Modelling Complex and Partially Identified Engineering Problems - Application to the Individualised Multi-Scale Simulation of the Musculoskeletal System"*, <https://www.sheffield.ac.uk/multisim-insigneo>

Funded by the UK Engineering and Physics and Science Research Council initially with an initial investment of a **£6.7** million and a following progression award of **£0.8** million.

- Principal Investigator, September 2019 - present.
- Project coordinator, April 2018 - August 2019.
- Work Package leader April 2013 - August 2019.

## EDUCATION

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Jan 2001- April 2004

PhD in Bioengineering, University of Bologna (IT).

Oct 1992 - Oct 1999

Laurea (MEng) in Computer Engineering, "Sapienza" University of Rome (IT).

## LANGUAGES

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Italian: 5/5 – English: 5/5 – Spanish: 3/5 - German:2/5.