

## **Current Appointments**

### *Main appointment*

University Professor of Biological Physics, Department of Physics, University of Cambridge (2016 – 2041; funded by University 100%)

### *Other appointments*

- Co-Director, Cambridge Centre for Physical Biology (2019-)

## **Qualifications**

2000-2003 Cambridge University Ph.D. in Physics

1993-1999 Università degli Studi di Milano Laurea in Physics, 110/110 cum laude

## **Previous Appointments & Education**

2006- Lecturer, Reader (2013) and Professor (2016) of Biological Physics - Cavendish Laboratory, Cambridge, UK

2004-2007 Oppenheimer Research Fellow Cavendish Laboratory, Cambridge, UK

Oct. 2005 Visiting Researcher Chem. Eng. Dept., Stanford University, USA

2003-2004 Postdoctoral Research Associate Nanotechnology I.R.C., Cambridge, UK

Oct. 2002 Visiting Student Chem. Eng. Dept., Stanford University, USA

2000-2003 Research Student, EPSRC Cavendish Laboratory, Cambridge, UK

1998-1999 Laurea project Department of Physics, Milan, Italy

**Areas of activity and expertise** - Published 144 papers, H index 48.

Biophysics: model cell membranes; mechanical properties of cells; flows induced by cilia; gene regulation; infection of red blood cells by malaria parasites; bacteria antibiotic resistance.

Soft Matter Physics: polymer systems; colloidal particles; liquid interfaces and films.

Experimental techniques: Instrument automation; microfluidics; optical tweezers; image/video analysis.

Graduate student supervision: Completed: 22 PhDs; 6 research MPhil. Current: 3 PhD students.

Examinations of PhD candidates: 42 UK; 7 non-UK.

## **Selected Prizes, Awards & Fellowships**

2015 Careri Award – University of Roma La Sapienza

2018 G I Taylor Lecture – Cambridge Philosophical Society

2022 Tom Duke Lectureship – Biological Physics group of the Institute of Physics

## **Membership of Professional Organisations**

Institute of Physics (IOP); Society of Rheology; Italian Statistical Physics Society.

## **Selected National/International Advisory Bodies and Committees**

- Chair of the Biological Physics Group of IOP, 2018 to 2021 (2010 to 2018 on committee and Treasurer).
- UK representative on IUPAP (International Union Pure and Applied Physics) commission C6 (Biological Physics) 2022-2025

## **Selected Other Roles at University of Cambridge**

- Deputy Head of Department, Cavendish Laboratory, 2017-2018.

- Head of Group (Spokesperson and coordinator for ~120 people), Biological&Soft sector, 2015 to date.
- Co-director of the EPSRC Center for Doctoral Training in “Sensor Technologies”, 2014 to date.
- Management Committee of the BBSRC Doctoral Training Programme, 2014 to 2017.
- Management Committee of the Systems Biology degree course at Cambridge, 2011 to date.

#### **Editorial Boards:**

- Editorial Board of IOP J.Phys.: Condensed Matter
- Subject Editor of Roy.Soc. Open Science.

#### **Journal Reviewer**

Received two prizes from Publons for reviewing services. Have reviewed over 250 papers.

#### **Grant Reviewer**

ERC, EPSRC, BBSRC, ANR France, DFG Germany; councils of Netherlands, Switzerland, Norway, Denmark, Italy.

#### **Organisation of Meetings:**

- Physics of Medicine kickoff meeting; 3-day international event; DAMTP Cambridge, 2007.
- Cavendish-Engineering-Addenbrookes joint Imaging Symposium; 1-day event; CR-UK Cambridge, 2009.
- LMB-Cavendish BioMembrane Workshop; 1-day local event; PoM Cambridge, 2009.
- Photonic Tools: Marker-free Imaging and Optical Manipulation; 1-day event; IoP London, 7 Dec. 2009.
- Workshop on Thermal Instabilities in Fluids; 1-day local event; Cambridge, 21 January 2011.
- CamBridgeSens workshop, Microfluidics in Biology, 1-day local event; Cambridge, Nov. 2012.
- Soft Matter and Biological Physics; 3-day international event; Cambridge, 2014 and 2016.
- Founder of Quantitative Methods in Gene Regulation; biannual 2-day event; 5th edition December 2019.
- Physics of Life, March 2023, Harrogate UK

#### **Selected Current Grant Income (out of a total of >£10M)**

- PI EPSRC Parallelised live microscopy for high-throughput behavioural phenotyping in malaria research, 2018-2022 £592K
- Co-I EPSRC GCRF Detailed malaria diagnostics with intelligent microscopy 2018-2022 £859K
- PI Cystic Fibrosis Trust, Pipeline for personalised CF treatment (2019- 2022) £500K.
- Co-I UKRI, Bacterial AMR PI for £300K (total £3M) (2019-2023).
- PI EPSRC Lung-on-Chip Healthcare, 2021-2022 £300K
- Joint PI of Cambridge University Academic Seed Fund for Physical/Life Sciences interface, £500K.
- Co-I UKRI, Infections of the sinuses; PI for £300K (total £3M) (2022-2026).