

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 165 papers, H index 55.

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; 7 research MPhil. Current: 5 PhD students.

Examinations of PhD candidates: 47 UK; 8 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) 2022-2026

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, Slovenia, 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 and 2025, 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) (2022-2025).

Key papers of 165:

- *Critical fluctuations in plasma membrane vesicles*; SL Veatch, P Cicuta, P Sengupta, A Honerkamp-Smith, D Holowka, ... **ACS chemical biology** 3 (5), 287-293 (2008)
- *Exploring automatic diagnosis of COVID-19 from crowdsourced respiratory sound data*; C Brown, J Chauhan, ... **Proc. 26th ACM SIGKDD international conference on knowledge** (2020)
- *Line tensions, correlation lengths, and critical exponents in lipid membranes near critical points*; AR Honerkamp-Smith, P Cicuta, MD Collins, et al. ... **Biophys. J.** 95, 236-246 (2008)
- *Inflammasome activation causes dual recruitment of NLRC4 and NLRP3 to the same macromolecular complex*; SM Man, LJ Hopkins, E Nugent, S Cox, IM Glück, P Tournomousis, ... **PNAS** 111 (20), 7403-7408 (2014)
- *Diffusion of liquid domains in lipid bilayer membranes*; P Cicuta, SL Keller, SL Veatch **The journal of physical chemistry B** 111 (13), 3328-3331 (2007)
- *Shearing or compressing a soft glass in 2D: time-concentration superposition*; P Cicuta, EJ Stancik, GG Fuller; **Physical Review Letters** 90 (23), 236101 (2003)
- *Direct exchange of vitamin B12 is demonstrated by modelling the growth dynamics of algal-bacterial cocultures*; MAA Grant, E Kazamia, P Cicuta, AG Smith; **ISME journal** 8 (7), 1418-1427 (2014)
- *A basic swimmer at low Reynolds number*; M Leoni, J Kotar, B Bassetti, P Cicuta, MC Lagomarsino **Soft Matter** 5 (2), 472-476 (2009)
- *Phagocytosis dynamics depends on target shape*; D Paul, S Achouri, YZ Yoon, J Herre, CE Bryant, P Cicuta **Biophysical journal** 105 (5), 1143-1150 (2013)
- *Hydrodynamic synchronization of colloidal oscillators*; J Kotar, M Leoni, B Bassetti, MC Lagomarsino, P Cicuta; **PNAS** 107 (17), 7669-7673 (2010)

Probo Goh