Dr Melpomeni Kalofonou, MEng, DIC, MSc, PhD, MIET, MIEEE

Centre for Bio-Inspired Technology (CBIT), Dept. of Electrical & Electronic Engineering Imperial College London, South Kensington Campus, London, SW7 2AZ, UK T: +44 (0)20 7594 1594 | m.kalofonou@imperial.ac.uk | http://www.imperial.ac.uk/people/m.kalofonou

APPOINTMENTS

<u>Centre for Bio-Inspired Technology</u>, Department of Electrical & Electronic Engineering Imperial College London

• 04/18-present Research Fellow in Cancer Technology

Please note that I was on maternity leave for the period January-July 2019

• 01/16-present Group Lead in Cancer Technology

• 01/14-04/18 Research Associate in Microchip-based Cancer Technologies

Patras Science & Technology Park S.A., Technology Incubator, Patras, Greece

12/07-05/08 Healthcare Technologies Researcher

Clinical Oncology Laboratory, Division of Oncology, University of Patras, Greece

• 10/05-present **Scientific Consultant**

EDUCATION

<u>Department of Electrical & Electronic Engineering</u>, Imperial College London

 10/09-10/13 Ph.D. in Biomedical Electronics: "Semiconductor technology for detection of DNA methylation-based biomarkers in early screening of cancer". Awarded with no corrections.

Department of Bioengineering, Imperial College London

• 10/08-09/09 **M.Sc. in Biomedical Engineering** (Specialisation: Biomechanics). Awarded with Distinction in project.

Department of Electrical & Computer Engineering, University of Patras, Greece

10/02-09/07 M.Eng. in Electrical and Computer Engineering (Specialisation: Systems and Control).
 Awarded with First Class Honours and Distinction in project.

RESEARCH FUNDING (Total 5-year contributions £693k in healthcare related projects)

- 2022-2023 **PI** "Delivering rapid and affordable molecular Lab-on-Chip technology for Ovarian Cancer screening and monitoring (LoC-DOC)" (£78,575), **Imperial Confidence in Concept Scheme** (MRC, Wellcome Trust Institutional Strategic Support Fund, NIHR Imperial BRC and Rosetrees Trust).
- 2021-2022 **PI** "Development of a microchip-based test to detect tumour DNA for colorectal cancer in blood and stools" (£78,456), **Imperial Confidence in Concept Scheme** in conjunction with Royal Marsden NHS Foundation Trust.
- 2018-2022 Named Senior Researcher & Co-I "Mi-CARE: A Microchip-based diagnostic Companion for Early Detection and Therapeutic Monitoring of Breast Cancer" (£466,770), Cancer Research UK & EPSRC (Multidisciplinary Award) - The news of the award were highlighted by the Host Department.
- 2019-2020 Named Senior Researcher & Co-I "Fast and precise detection of DNA methylation using a sample-to-result platform for cancer patients" (£59,698), EPSRC Impact Acceleration Award (Late Stage), 2018 Named Senior Researcher & Co-I "Development of a novel method for quantification of DNA Methylation in cancer patients" (£10,000), EPSRC Impact Acceleration Award (Early Stage).
- 2015-2020 **Named Researcher and part of interview team** "Disruptive Semiconductor technology for advance healthcare systems" (£692,737), **EPSRC** (EP/N002474/1).
- 2015-2017 Named Co-I "Network of Excellence for development of a Point-of-Care Breath Analysing device for Oesophago-Gastric cancer screening" (£100,000), Wellcome Trust/Imperial College - ISSF Networks of Excellence Awards.

PROFESSIONAL SERVICE

- Departmental (EEE) representative on Cancer Technologies and Innovation in Cancer Diagnostics
 in Cancer Engineering Network of Excellence, CRUK Imperial Centre, Cancer Research Centre of
 Excellence (CRCE), CRUK Convergence Science Centre.
- Technical Program Committee (TPC) for IEEE BioSensors 2024, BioSensors 2023 (launch).
- Technical Committee Member of IEEE Biomedical Circuits and Systems Society (BioCAS-TC).
- Registered/Licensed Chartered Electrical Engineer, Member of the Institute of Electrical & Electronic Engineers (IEEE), Institution of Engineering & Technology (IET), IEEE Circuits and Systems Society (IEEE-CAS), IEEE Engineering in Medicine and Biology Society (IEEE-EMBS), Association of Biomedical

- Engineering, Medical Engineers and Bioengineers (BioMedEng) and the European Society of Medical Oncology (ESMO).
- Member of the organizational committee & conference chair of the Bi-Annual Educational Seminar on Diagnostics and Therapeutic Advances in Clinical Cancer Research, "Advances in Oncology", chaired by the Division of Oncology, University of Patras, Greece.
- **Member** of the CRUK Imperial Centre Review Committee panel for assessing multidisciplinary awards (CRUK Development Fund, CRUK Imperial Centre PhD Studentships) related to the acceleration of the transition of lab-based discoveries into the clinic.
- Associate Editor of IEEE Transactions on Biomedical Circuits and Systems journal (TBioCAS), IEEE
 Open Journal of Circuits and Systems (OJCAS), Guest Editor for the Special Issue IEEE TBioCAS 2017.
- Review Committee Member (RCM) for IEEE ISCAS (2018-2024), IEEE BioCAS (2017-2023).
- Journals/Conferences Reviewer in IEEE Transactions on Biomedical Circuits and Systems (TBioCAS), IEEE Sensors, IET Electronics Letters, Sensors and Actuators B: Chemical, Nature Scientific Reports, Cancers, Annals of Translational Medicine, Artificial Intelligence in Medicine, IEEE International Symposium on Circuits & Systems (ISCAS), IEEE International Symposium on Biomedical Circuits & Systems (BioCAS).

INVITED TALKS/OUTREACH/INDUSTRIAL COLLABORATION

- 19 invited talks and guest lectures since 2014 in venues including the Sensor100 Cancer Diagnostic Technology Summit, Imperial Continuing Professional Development group, Imperial Festival, launch of "Imperial West", Cancer Research UK Imperial Centre, World Precision Medicine Congress, Oncological Congress of Greek Diaspora organised by the Hellenic Society of Oncologists (EOPE), Educational seminar on Diagnostics in Clinical Cancer Research, Microsoft Hackathon, European Association for Cancer Research (EACR), Pint of Science.
- My research profile was highlighted at the "Year of Engineering 2019" campaign, by the Electrical and Electronic Engineering's outreach team. The campaign was organised by the Royal Academy of Engineering at a national level (2019).
- Participation in funders showcases taking place at Imperial College London representing the Cancer Engineering Research Theme of CBIT/EEE at the CRUK Strategy Launch (2015), ICR/Imperial CRUK Show and Tell Meeting (2016), Launch of Cancer Research Centre of Excellence (CRCE) (2017).
- Industrial collaboration with AstraZeneca's research team for Diagnostic Innovation in Near Patient Medical Devices (Oncology & Biopharm), nominated by the Faculty of Medicine's Industry Partnerships and Commercialisation team, Imperial Enterprise and selected by AstraZeneca's R&D Oncology and Diagnostic Development Unit to expand the proposed research plan (2022-present).

STUDENT SUPERVISION/RESEARCH GROUP ROLES

- PhD research co-supervision (2013-present): 6 PhD students (2 graduated) with awarded scholarships after nominations which I have co-authored, including the Electrical and Electronic Engineering Department Maria Petrou scholarship for women (2023-2027), ICR and Imperial Convergence Science PhD program scholarship (2018-2024), the Leventis Foundation scholarship (2019-2022) and the Val O'Donoghue scholarship in Electrical & Electronic Engineering (2019-2022).
- Research project supervision (2013-present): 26 undergraduate and postgraduate students including
 1 BEng in Electrical and Electronic Engineering (EEE), 4 BSc in Pharmacology (Intercalated programme),
 1 MEng in Biomedical Engineering (Bioengineering), 10 MSc in Circuits and Systems, Communications
 and Signal Processing, Control and Power, Applied Machine Learning (EEE), 6 MSc in Genomic Medicine
 (National Heart and Lung Institute), 1 MRes in Cancer Biology (Surgery & Cancer), 2 MRes in
 Nanomaterials (Chemistry), 1 MSc in Biomedical Engineering (Bioengineering) and 4 UROP student
 placements.
- CBIT's Genetics Lab Manager, Health and Safety Instructor and Reviewer of Health & Safety and Code of Practice guidelines (2013-present).

PUBLICATIONS

24 journals, 14 peer-reviewed conferences, 10 conference abstracts, 1 Guest Editorial and 1 Patent Google scholar profile https://scholar.google.co.uk/citations?user=d4hjahoAAAAJ&hl=en&oi=ao