Ms Julia Bakker

The Institute of Cancer Research

Julia Bakker is the Senior Media Officer at The Institute of Cancer Research London. She works closely with ICR researchers and national journalists to secure news coverage of the ICR's latest research advances and briefs ICR spokespeople prior to media engagement. She is an experienced science communicator having worked at leading UK medical research charities.

Miss Juanita Bawagan

The Institute of Cancer Research

Juanita Bawagan is a Fundraising Communications Manager at the Institute of Cancer Research, London. Her work has been published by media outlets including BBC Science Focus, Science and Physics World, and by world-leading research organisations. She studied journalism at Carleton University and earned a master’s degree in science communication from Imperial College London.

Dr. Giulio Caravagna

University of Trieste

Giulio Caravagna is the principal investigator of the Cancer Data Science (CDS) Laboratory at the University of Trieste, where he develops new computational technologies to analyse cancer sequencing data, including bulk whole genomes and single-cell multi-omic assays. By engaging with experimental and clinical units, the CDS lab works at the intersection of computational and experimental research, generating also new data to approach real-world biological questions with state-of-the-art Machine Learning.

Giulio trained in computer science at the University of Pisa (BSc and MSc Hons. and PhD, 2011). He then carried out postdoctoral training in mathematical models for biology at Milan-Bicocca Informatics (2011-14), in machine learning for biology at the School of Informatics of the University of Edinburgh (2014-15), and in statistical models for evolutionary cancer genomics at the Institute of Cancer Research in London (2017-20). Since 2020, he is a tenure track researcher at the University of Trieste (Department of Mathematics and Geosciences), where he runs the CDS Lab. His research is funded by a AIRC MFAG Grant (2021-26) and other initiatives.

Mr Luis Cisneros

Arizona State University

My main interests are the study of the mechanisms of emergence of collective behavior in complex systems and how information dynamics and interaction lead to cooperative self-organization. In my scientific career, I have studied these subjects in different classes of systems, going from theoretical, to computational to data-driven approaches. I started as a theoretical physicist and then moved into applied topics of nonlinear dynamics and biophysics. My current work focuses on looking at cancer as a breakdown of the organization of multicellular structures, as well as diversification and adaptation processes in cellular population dynamics. I have been implementing methods from landscape ecology and spatial statistics to investigate and characterize digital histopathological data.

Dr. Robert Gatenby

Moffit Cancer Center

I have spent many years investigating evolutionary dynamics and associated mathematical models to cancer biology and treatment

Dr Weini Huang

Queen Mary University of London

Weini Huang is a senior lecturer in mathematical biology in Queen Mary University of London. Weini is interested in understanding how diversity and population patterns are formed and maintained in nature/human cell populations. She mainly use stochastic models and individual based simulations to model and analyse cancer evolution and species interactions in biological systems. She is interested in theoretical predictions of those complex systems as well as their connections with experimental/clinical observations. She collaborates with experimental evolution groups and cancer biologists/clinicians, such as the evolution of trade-offs in a bacteria-ciliate system and drug resistance in ovarian cancer, ecDNA copy number distribution, mtDNA dynamcis in healthy liver.

Before being a lecturer in mathematical biology in 2018, Weini worked as a postdoctoral researcher in the Barts Cancer Institute, QMUL for modelling cancer spatial heterogeneity and the evolution of tumour resistance, and obtained her PhD in 2012 in Evolutionary Theory in the Max Planck Institute of Evolutionary Biology.

Dr Eszter Lakatos

Institute of Cancer Research

I am a computational biologist passionate about developing quantitative techniques to understand the principles governing disease, especially cancer.

I completed a degree in Molecular Bionics and Infobionics Pázmány Péter Katolikus Egyetem in Budapest. During my studies I was particularly focused on cell and mathematical biology, which I deepened during my doctoral degree as a Schrödinger Scholarship fellow at Imperial College London. In my thesis, I developed modelling and analytical tools for stochastic models to the behaviour of noisy biological systems.

Following my PhD I moved to the Evolution and Cancer Group at Barts Cancer Centre to apply my experience in mathematics to a new field – cancer evolution. I use a combination of mathematical models and bioinformatics to study next generation sequencing data, and I am particularly interested in how the genome of cancers changes when they interact with the immune system.

Dr Michelle Lockley

Queen Mary University of London

Dr Lockley is a Clinician Scientist and Honorary Consultant Medical Oncologist specialising in ovarian cancer. She has previously held Clinician Scientist and Advanced Clinician Scientist Fellowships from Cancer Research UK.
The most common subtype of ovarian cancer, known as high grade serous cancer (HGSC) is initially very responsive to platinum and taxane chemotherapy but more than 70% patients develop chemotherapy resistance and the disease becomes incurable. Circumventing drug resistance is therefore a major unmet clinical need a focus of Dr Lockley's research. Her lab has created a panel of drug resistant HGSC cell lines and animal models and have already used these models to identify treatments for platinum-resistant disease.
Adaptive Therapy is a novel treatment paradigm in which drug dose is tailored to the evolution of chemotherapy resistance in individual patients over time. Dr Lockley's team have demonstrated the feasibility of adaptive therapy in ovarian cancer and has begun to elucidate the underlying genetic mechanisms, moreover, they have successfully translated this approach to the first randomised clinical trial to test adaptive therapy in cancer patients. The ACTOv clinical trial (Adaptive ChemoTherapy in Ovarian cancer) will commence recruitment of ovarian cancer patients from 9 UK sites in 2022. The associated translational research programme is aimed at understanding the evolution of resistance to platinum chemotherapy and elucidating the mechanisms that underpin adaptive therapy.

Dr Diego Mallo Adan

Arizona State University

Diego Mallo, Ph.D., is a computational phylogeneticist aspiring to understand the evolution of somatic cells. He received his Ph.D. from the University of Vigo, Spain, where he worked on species tree reconstruction methods. Dr. Mallo moved to the USA to pursue his career, joining Carlo Maley's lab at ASU. As an Assistant Research Scientist here, he develops computational tools to reconstruct the unseen course of cancer: how they initiate and evolve within a patient. Dr. Mallo is a firm supporter of open science and thinks that somatic phylogenetic tools will change how cancer is prevented and managed in the clinic.

Dr. Kateřina Staňková

Delft University of Technology

I am an associate professor at Delft University of Technology and Delft Technology Fellow. I have a doctorate from the Delft Institute of Applied Mathematics in Stackelberg game theory and postdoctoral experience from the French Institute for Research in Computer Science and Automation in system identification and Delft Center for Systems and Control in game-theory based optimal control. Before joining Delft University of Technology, I was assistant and associate professor at Maastricht University, where I set up and led its Dynamic Game Theory team.

I am a game theoretician who focuses on both theory of differential and evolutionary games and applying this theory to solve real-world problems. In recent years, I have been focusing mostly on game -theory based treatments of metastatic cancers, which are more effective and less toxic than standard of care. Stackelberg evolutionary game theory that I develop may be equally influential for other domains, such as pest control, traffic control or for maintaining biological resources (e.g. fisheries).

To really make a difference in healthcare, I collaborate with physicians, oncologists, cancer biologists and data scientists. Together we design evolutionary therapies for metastatic cancers, i.e. therapies that anticipate and steer treatment-induced resistance in cancer cells. These treatments show a great promise in clinical trials. For my work in mathematical oncology, I received the 2020 Dutch Research Council Stairway to Impact award (https://bit.ly/3HF6BtQ).

I lead a number of projects, such as European Training Network "EvoGamesPlus" - Evolutionary Game Theory and Population Dynamics: From Theory to Applications (www.evogamesplus.eu) and NWO KLEIN2 project "Understanding cancer through game theory and dynamical systems theory". For more information about my research, visit my website www.stankova.net/.

Dr Nick Trahearn

The Institute of Cancer Research

Nick Trahearn is a Postdoctoral Training Fellow at the Institute of Cancer Research, London. In his 9 years working in the field of Digital Pathology he has worked directly on projects for assistive diagnostics and for exploritory study of the tumour microenvironment. Originating from a computer science background, he began working on diagnostic whole slide images in 2013 when he joined the Tissue Image Analytics Lab at the University of Warwick, where he received his PhD. His current research interests are in the use of image analysis and deep learning to discover features of the tissue microenvironment that are predictive of patient outcome in prostate and colorectal cancers. Concurrently, he is also interested in investigating how these findings can be combined with findings from other modalities to provide a richer view of cancer biology.