

Science Dialogues Series

Machine Learning in Healthcare

Toward a new human-machine partnership

16:00 GMT
Fri 11 Feb 17:00 C ET
18:00 E ET

Prof Cigdem Gunduz Demir
Koç University (Turkey)

Prof Katarzyna Kolasa
Kozminski University (Poland)





Prof Arvydas Laurinavicius
Vilnius University (Lithuania)

Dr Dean Palejev
Sofia University (Bulgaria)

Dr Miklós Szócska
Semmelweis University (Hungary)

Keynote:
Prof Mihaela van der Schaar
University of Cambridge

Moderator:
Susan Watts
Strategic Science Communication

**On the International Day of Women and Girls in Science,
An Invitation to join a [Science & Innovation Dialogues](#) event:**

“Machine Learning in Healthcare: Towards a New Human-Machine Partnership”

I'd like to invite you to join an online event organised by the UK Science and Innovation Network, the British Council, and UNESCO's International Research Centre for Artificial Intelligence, on the topic of “Machine Learning in Healthcare: Towards a New Human-Machine Partnership” **at 1600 GMT/1700 CET/1800 EET on 11 February 2022, [the UN's International Day of Women and Girls in Science](#).**

The keynote speaker at the event will be **Prof Mihaela van der Schaar, the John Humphrey Plummer Professor of Machine Learning, Artificial Intelligence and Medicine at the University of Cambridge**. I enclose her biography below. Mihaela will be joined by a panel of five distinguished European experts for a roundtable discussion on the uses of AI in tackling key healthcare challenges, and how we can move towards a better partnership between humans and machines, followed by questions and answers from the audience.

This will be one event in a series of three “Science & Innovation Dialogues” our organisations will be jointly running on the theme of Artificial Intelligence, across ten countries in the Baltics, Central and Eastern, and Southern Europe. The series aims to highlight science excellence in the UK and in this region; and to facilitate exchange of best practice. We plan for the event to be streamed live to a wide audience in the UK and across the region using British Embassy, British Council, and IRCAI channels.

Registration link here:

bit.ly/SD2022-Ep2

Thank you very much for your kind consideration.

Website: <https://ircai.org/series-science-and-innovation-dialogues/>

Keynote speaker: Prof Mihaela van der Schaar, University of Cambridge



Mihaela is the John Humphrey Plummer Professor of Machine Learning, Artificial Intelligence and Medicine at the University of Cambridge, a Fellow at The Alan Turing Institute in London, and a Chancellor's Professor at UCLA. In addition to leading the van der Schaar Lab, Mihaela is founder and director of the Cambridge Centre for AI in Medicine (CCAIM).

Her research interests are on machine learning with applications to medicine, finance and education. She has also worked on data science, network science, game theory, signal and image processing, communication networks, network science and multimedia. Prior to her academic career, she was a Senior Researcher at Philips Research in the Netherlands and USA.

Mihaela was elected IEEE Fellow in 2009. She has received numerous awards, including the Oon Prize on Preventative Medicine from the University of Cambridge (2018), a National Science Foundation CAREER Award (2004), 3 IBM Faculty Awards, the IBM Exploratory Stream Analytics Innovation Award, the Philips Make a Difference Award and several best paper awards, including the IEEE Darlington Award.

Mihaela is personally credited as inventor on 35 USA patents, many of which are still frequently cited and adopted in standards. She has made over 45 contributions to international standards for which she received 3 ISO Awards.

Mihaela is a leader and mentor in both science and in science communication. Her Ph.D. students and postdocs have gone on to excellent academic positions internationally (across 4 continents!) and are becoming recognised as leaders in their own right. She has also organised numerous outreach activities, several of which are dedicated to empowering women in engineering and computer science.

Mihaela recently launched Inspiration Exchange, an online series of engagement sessions aiming to share ideas with young researchers in machine learning for healthcare. To build

partnerships with clinicians, she created Revolutionizing Healthcare, a regular online engagement series which now has roughly 400 clinicians from around the world registered to participate.

Prof Cigdem Gunduz Demir, Koc University, Center of Artificial Intelligence (Turkey)



Prof. Gunduz Demir received her B.Sc and M.Sc degrees in computer engineering from Bogazici University, Turkey, in 1999 and 2001, respectively, and her Ph.D. in computer science from Rensselaer Polytechnic Institute, New York, in 2005. She is currently a Professor of Computer Engineering and the Deputy Director of the Center of Artificial Intelligence at Koc University. Before joining Koc University, she was working as a faculty member at the Computer Engineering Department at Bilkent University. She was a visiting professor at Nanyang Technological University NTU, Singapore, in fall 2009, and Stanford University in spring 2013. Her main research interests and projects include development of new computational methods based on deep learning and computer vision for medical image analysis. Currently, her research group works on the interdisciplinary projects in collaborations with the Departments of Pathology and Biology for the microscopic analysis of histopathological images and in vitro fluorescence and live cell images and with the Departments of Ophthalmology, Radiology, and Anatomy for the analysis of images acquired with in vivo imaging of CT, MR, and OCT. She was a recipient of Distinguished Young Scientist of the Turkish Academy of Sciences and CAREER Award of the National Scientific and Technological Research Council of Turkey.

Prof Katarzyna Kolasa, Kozminski University, VP HEOR Science Parexel Europe & ISPOR Digital Health SIG Chair (Poland)



Driven with a passion for health economics, Katarzyna has more than 20 years of academic and industry experience in the field of healthcare. Holding various regional and global leadership positions, she has gained experience with pricing and reimbursement challenges in both pharma and medtech industry. At AstraZeneca and Biogen/Dec, Katarzyna held Global and European positions respectively. At Bristol Myers Squibb and Lundbeck she led Market Access teams in the Central Eastern European and Nordic regions. After being Senior Sales Director responsible for HEOR at GE Healthcare, she has been supporting various med tech companies with RWE generation and reimbursement submissions for medical devices and digital health solutions globally.

Her PhD thesis was developed at the University of York, University of Lund, and the University of Bergen, as well as during the International Doctoral Courses in the Health Economics and Policy organized by the Swiss School of Public Health.

As Vice President of HEOR Science at PAREXEL she supervises various HEOR Modeling teams. At the Kozminski University, she leads International Master Program Health Economics & Big Data (HEBDA) financed by the EU research grant of the National Center for Research and Development. Among HEBDA tutors, there are teachers from the University of Erasmus, the University of Athens, Illinois, and University of Applied Sciences in Berlin.

Since October 2020, she is a member of ISPOR's Health Sciences Policy Council (HSPC). She is the chair of ISPOR Special Interest Group Digital Health as well. The mission is to address new opportunities in the healthcare sector emerging from the increasing use of digital technologies, specifically telemedicine and mobile devices (mHealth), and to evaluate the impact of information and communication technology on health outcomes. The key SIG project is the "Scoping review of digital health definitions used in literature and in practice"

Katarzyna Kolasa is the Guest Editor of Special Issue "Quest for Value Drivers of Digital Health Solutions in the Post COVID-19 Era" at International Journal of Environmental Research and Public Health (ISSN 1660-4601) (IF 3.2)

She has been collaborating with Ministry of Health in Poland leading the project of the optimal allocation of CT scanners for the Polish Ministry of Health. It was the adaption of evolutionary algorithms to analyze more than 120 mln historical CT procedures. In addition, her research agenda relates to the value frameworks of medical devices and digital health interventions. She currently serves as external expert for the patients' preference study to establish attribute for oncological care assessment organized by the Polish HTA agency.

Prof. Arvydas Laurinavicius, Vilnius University, Faculty of Medicine (Lithuania)



Arvydas Laurinavicius is pathology professor at Vilnius University Faculty of Medicine and serves as director of the National Center of Pathology, affiliate of Vilnius University Hospital Santaros Klinikos. He graduated from the Medical Faculty of Vilnius University in 1987, accomplished Ph.D. program at the Moscow Medical Academy in 1992, and Fellowship in Renal Pathology at the Harvard Medical School in 1997. He is involved in digital health and informatics initiatives and research. He was a member of the Management Board of the SNOMED International (2007-2012) and has chaired its Research and Innovation Committee in 2007-2009. His research focuses on digital pathology and AI solutions for prognostic disease modelling. In particular, Arvydas' team has proposed computational pathology methods to assess intratumoural heterogeneity and antitumour immune response.

Dr Dean Palejev, Sofia University, Big Data for Smart Society (GATE) Institute, & AI Cluster Bulgaria



Dr. Dean Palejev leads the Digital Health initiatives at GATE. He is also Associate Professor at the Institute of Mathematics and Informatics at the Bulgarian Academy of Sciences. His main interests are in AI and ML applications to biomedical data, as well as Bioinformatics and Biostatistics. Prior to joining GATE, he created and led for more than five years the Data Science unit of what is now the largest financial group in the country. Dr. Palejev has a MSc degree in Mathematics from Sofia University and a Ph.D. in Statistics from Yale. He has co-authored articles in some of the most prestigious scientific journals such as Science, Nature, Cell and PNAS.

The Big Data for Smart Society Institute (GATE) is a purpose-build institute established in 2019 with the ultimate goal of creating a European ecosystem that will serve as a bridge between the scientific community and industry. GATE develops research capacity and potential in Big Data and Artificial Intelligence, cultivating the next generation of leading scientists by expanding the existing research network and establishing long-term agreements with leading global organizations. At the same time, the Institute builds sustainable stakeholder relationships, focusing on technological collaboration between

government, industry, academia and non-governmental organizations towards Artificial Intelligence and smart decision-making models.

Dr Miklós Szócska, Semmelweis University, Department of Health and Public Administration (Hungary)



Dr. Miklós Szócska graduated from the Semmelweis University (SU) of Medicine in 1989. He holds a Master of Public Administration degree from the John F. Kennedy School of Government at Harvard University (1998), and a Ph.D. from the SU in the field of change management (2003). After his graduation he and his colleagues initiated the creation of the Health Services Management Training Centre (officially established in 1995). Between 1995 and 2000 he was serving as the deputy director and in 2000 he was appointed to be the director of the Centre.

Between 2010-2014 Dr. Szócska served as the Minister of State for Health of the Hungarian Government. Since 2014 he serves again as the Director of HSMTC and became responsible for the Institute of Digital Health Sciences at SU. In 2016 He was nominated by the Hungarian Government for the DG position of the WHO. In July 2019 Dr Szócska was appointed to be the Dean of the Faculty of Health and Public Administration at Semmelweis University.

Moderator: Susan Watts



Susan is an award-winning journalist and communicator. She is a writer, broadcaster and speaker on science, technology, environment, medicine and health in a political, social and economic context. Most recently, she was Head of Communications at two research institutes, Rothamsted Research and the MRC London Institute of Medical Sciences. She has provided advice to institute directors on strategy, media operations and outreach programmes. She has a keen knowledge of research priorities and their interplay with public policy-making. Her ongoing projects include chairing debates/discussions and “masterclass” tutor on science communications and engagement.