

Dutch Israeli Mini-Symposium on AI and Radiology

Thursday 20 January 2022 11:00-13:00 IL time 10:00-12:00 NL time

Zoom: https://us06web.zoom.us/j/89923763025?pwd=OUZob3hoTks1RWlRdjFwek0vTTVuUT09, Meeting ID: 899 2376 3025, Passcode: 289558

YouTube Live: <u>https://youtu.be/oCloePiOH-c</u>

Registration: https://www.eventbrite.com/e/dutch-israeli-mini-symposium-on-ai-radiology-tickets-218678060967

Objective

To share knowledge on the state-of-the-art radiology and AI technologies developed in the Netherlands and in Israel.

Background

Radiology is a specialty of medicine in which images of the body's organs are interpreted to diagnose disease. It is vital for nearly every sector of health care, including surgery, pediatrics, obstetrics, cancer-care, trauma-response, emergency medicine, infectious disease and much more. With the advent of new technologies, doctors can now analyze these images to detect epidemics more quickly and accurately. Radiology is a vital component of most medical decisions affecting patient care and radiologists work with all clinical specialties.

However, with the huge amounts of radiology imaging data, artificial intelligence (AI) can be used to increase quality of image readings and improve efficiency, both for better patient outcomes. Additionally, AI is an important enabler of precision medicine. As more patient data becomes available, we can determine in a more detailed way what information implies certain treatments leading to better patient outcomes. In terms of efficiency, AI can speed up the diagnosis process by automating tasks that are time consuming when performed manually or help the radiologist prioritize urgent cases. Which imaging exams should the radiologist assess first? AI can do a first assessment and move cases up the list if necessary.

Open Horizon Europe and IHI-JU funding opportunities

- Horizon-Europe Cancer Mission: <u>HORIZON-MISS-2021-CANCER-02-03</u>: Better understanding of the impact of risk factors and health determinants on the development and progression of cancer. <u>Imaging could be</u> <u>a part of a broader project in this call. This call is limited to cancer only.</u> Deadline 22 April 2022
- Horizon-Europe Cancer Mission: <u>HORIZON-MISS-2021-CANCER-02-01</u> Develop new methods and technologies for cancer screening and early detection. <u>This call is limited to cancer only.</u> Deadline 22 April 2022
- Innovative Health Initiative: <u>Theme: Next generation imaging and image-guided diagnosis and therapy for</u> <u>cancer</u>. <u>This call is limited to cancer only.</u>



Program

Moderator: Dr. <u>Racheli Kreisberg</u>, Innovation Attaché, Netherlands Embassy in Israel and Israeli Dutch Innovation Center (<u>IDIC</u>)

11:00-11:05 *Welcome note*

Dr. <u>Chen Sagiv</u>, Co-Founder and CEO DeePathology. AI, and Israeli Dutch Innovation Center Advisory Board Member

11:05-11:20 Diagnostics and AI Dr. Efrat Shefer, President Philips Israel and Israeli Dutch Innovation Center Advisory Board Member

- 11:20-11:35Accelerated care coordination powered by AIMs. Naama Mayer, AI Team Manager, Viz.ai, Israel
- 11:40-11:55 **Challenges for radiology in 2030: can artificial intelligence help?** Dr. <u>Thomas Kwee</u>, Department of Radiology, University Medical Center Groningen, University of Groningen, Groningen, The Netherlands
- 11:55-12:10Transforming Healthcare with AIDr. Ayelet Akselrod-Ballin, Vice President of R&D at Nanox-AI (Previously Zebra Medical Vision)
- 12:15-12:30 Will AI make radiology more or less expensive? Prof. <u>Bram van Ginneken</u>, Radboud University Medical Center, the Netherlands
- 12:30-12:45 Al in radiology a clinical prospective Dr. <u>Michal Guindy</u>, Head of venture and innovation, Director of imaging services, Assuta medical centers
- 12:45-13:00 New EU funding opportunities for R&D international consortia projects in the fields of cancer screening and image-guided diagnosis & therapy Mr. <u>Nir Shaked</u>, Head of Sector and National Contact Point Health, Agriculture & Food and Biodiversity, Israel-Europe R&I Directorate (ISERD), Israel Innovation Authority Mr. Jost de Bruin, Advisor Life Sciences & Health, RVO, Netherlands Enterprise Agency

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Biosketches Speakers

Dr. Chen Sagiv



Chen Sagiv is the co-founder and co-CEO of SagivTech, a computer vision and AI projects company as well as the co-founder and co-CEO of DeePathology, a company that aims to disrupt pathology with AI. Prior to establishing SagivTech Chen worked as algorithms developer in Israel and the Netherlands. Chen is also the co-founder of the largest computer vision and AI event in Israel: IMVC – Israel Machine Vision Conference. Besides her professional activities Chen volunteers as a Math teacher for at risk youth and she serves as a member in the committee to promote women in science and technology at the Israeli Science and Technology Ministry. Chen holds a BSc. In Physics

and Mathematics, MSc. in Physics and a PhD. In Applied Mathematics all from the Tel Aviv University and did her PostDoc at the University of Bremen in Germany.

Dr. Efrat Shefer



Dr. Efrat Shefer is the President of Philips Israel. With more than 20 years of experience in medical devices and Healthcare informatics Efrat has a successful record of achieving ambitious targets, delivering growth, and leading her organization through transformations. As the President of Philips Israel, she plays an important role in the transition of Philips to a customer-centric, digital solutions company. Efrat is committed to achieving Philips' goal of improving people's lives through meaningful innovation by long term strategic collaborations with the healthcare system, government, industry, and academic institutions. Previously Efrat was the GM of Philips Imaging Clinical Applications business unit

and prior to that she led the Oncology Informatics venture at Philips focusing on informatics and decision support solutions for oncologists. Efrat is a Board member at the Israeli Advanced Technology Industries Association and a member of the Health Network – 8400. Efrat Holds an M.Sc. and a Ph.D. in Physics from the Weizmann Institute of science and a B.Sc. in Physics and Mathematics from the Hebrew university of Jerusalem.

Ms. Naama Mayer



Naama Mayer serves as an AI team manager in Viz.ai where she leads the development of several FDA-approved AI algorithms in the neuro-radiology domain. Committed to Viz.ai's core value that "time is brain", Naama and her team are developing state-of-the-art algorithms to provide every patient with accelerated and life-saving care coordination. Naama has more than 10 years of experience in R&D managerial positions in the medical device and digital health industries, focusing on computer vision, NLP, and computational geometry technologies. Naama holds a

B.Sc. and an M.Sc. in Computer science from Tel Aviv University (both magna cum laude).

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Dr. Thomas Kwee



Thomas Kwee graduated from medical school in 2006, obtained a PhD on the topic of whole-body MRI in 2011, and was trained as a radiologist at the University Medical Center Utrecht (the Netherlands). He also worked as a researcher at the University of Michigan (USA). He is currently active as a radiologist at the University Medical Center Groningen (The Netherlands) and serves as

an associate professor and vice-chair of the department. His main research interests are oncological imaging, healthcare policy and management, value-based healthcare, and artificial intelligence.

Dr. Ayelet Akselrod-Ballin



Ayelet Akselrod-Ballin is the Vice President of R&D at Nanox-AI (formally Zebra Medical Vision) where she has been leading the research and engineering departments in developing state-of-the-art FDA approved AI healthcare products. With over 20 years of experience both in Academia and Industry focusing on novel Computer Vision, Machine Learning(ML), Deep Learning(DL), and Natural Language Processes (NLP) technologies applied to healthcare. Ayelet did her post-doctoral research as a fellow in the Computational Radiology Laboratory at

Harvard Medical School, Children's Hospital (Boston) and she holds a Ph.D. in Applied Mathematics and Computer Science from Weizmann Institute of Science. Prior to joining Zebra Medical Vision, Ayelet was the medical imaging research technology lead at IBM-Research Haifa and managed the Computer Vision & Algorithms group at the MOD. Upon her academic activities she is a WIM (Women in MICCAI) board executive, and has published more than 25 scientific papers.

Prof. Bram van Ginneken



Bram van Ginneken is Professor of Medical Image Analysis at Radboud University Medical Center and chairs the Diagnostic Image Analysis Group. He also works for Fraunhofer MEVIS in Bremen, Germany, and is a founder of Thirona, a company that develops software and provides services for medical image analysis. He studied Physics at Eindhoven University of Technology and Utrecht University. In 2001, he obtained his PhD at the Image Sciences Institute on Computer-Aided Diagnosis in Chest Radiography. He has (co-)authored over 250 publications in international

journals. He is member of the Editorial Board of Medical Image Analysis. He pioneered the concept of challenges in medical image analysis.

Dr. Michal Guindy



Michal Guindy, M.D. MPA received her MD from Ben-Gurion University Medical School, Beer Sheva, Israel. She specialized in radiology and is still a practicing radiologist (breast). In 2001 She earned a MPA from the Kennedy School of government – Harvard University Boston USA. In Maccabi health care (HMO) Michal held several management positions. She chaired the risk management and patient safety department, was head of central services, responsible for radiology telemedicine, laboratory including pathology lab, pharmacy, and call center. She served

as a medical director of the Central district (responsible for medical services provided to 250,000 people). For the last six years she is the head of Imaging of Assuta Medical Centers. Responsible running the 7 imaging centers across Israel producing over 600,000 studies annually. Her academic activities include initiation and implementation of patient safety program (WHO initiative) in Sackler Medical School, Tel Aviv.

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Mr. Nir Shaked



Mr. Shaked is the Israeli National Contact Point and head of the health, agriculture & food, and biodiversity sectors at the Israel-Europe Research & Innovation Directorate withing the Israeli Innovation Authority. Prior to that he served as a senior government communications officer in the Israeli Ministries of Labor and Social Affairs and Science and Technology; worked as a Clinical Research Coordinator in the oncology field at Tel-Aviv Sourasky Medical Center, and as a medical imaging software solutions quality assurance engineer at Algotec. Mr. Shaked holds a B.Sc. in Life

Sciences from Tel Aviv University.

Jost de Bruin



Jost de Bruin received his master's degree in Biomedical Sciences and Infection & Immunity at Utrecht University in the Netherlands. His research topics include investigation of entry requirements of Enterovirus D68 and research & development of new ways to stimulate innate immune responses against Mycobacterium Tuberculosis and Salmonella Typhimurium at the university of Queensland, Australia. Following a brief period in the lab, Jost has worked for 4 years as a life science and business consultant, working to help researchers and entrepreneurs

attract investment, funding and design sustainability and commercialization strategies. He has been particularly active in setting up public-private partnerships on the European level through the Innovative Medicine Initiative, including the 'BigPicture' and 'OPTIMA' initiatives. He is currently employed at the Dutch entrepreneur agency (RVO) as national contact point for Horizon Europe and national focal point for EU4Health.

Biosketch Organizer

Dr. Racheli Kreisberg



Dr. Racheli Kreisberg serves since January 2016 as the Innovation Attaché of the Netherlands Innovation Network, Ministry of Economic Affairs and Climat Policy, at the Netherlands Embassy in Israel. She is responsible for developing R&D and business collaborations between Dutch and Israeli companies, universities and research institutions. Her work is addresses and implments the innovation of the Netherlands (i.e., Dutch societal challenges, mission driven innovation policy, Key Emerging Technologies) as well as the UN societal development goals (SDGs). Prior to this position she managed her own consultancy company that specialized in the initiation and management of

collaborative EU research projects (i.e., Horizon2020) and she serves as an evaluator of the European Commission. Dr. Kreisberg was the Head of the Bioinformatics Unit of Tel Aviv University between 1998-2005. She holds a PhD in Biotechnology and Molecular Microbiology from Tel Aviv University (TAU), an Executive MBA from TAU, an MSc in Chemistry (summa cum laude) from the Technion Israel Institute of Technology, and a B.Sc in biology from the Hebrew University in Jerusalem. Racheli was born in the Netherlands and immigrated with her family to Israel.

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