Expert Forum on "AI in Minimally Invasive Surgery & Treatment"

Summary

On 3rd December, the UK Science and Innovation Network (SIN) at the British Embassy in Berlin in cooperation with Forum Digital Technologies is organising an AI Expert Forum on "AI in Minimally Invasive Surgery and Treatment". The Expert Forum will be open to a selected number of experts from relevant research fields and may touch upon areas such as computational imaging, computer vision, surgical robotics, etc.

The Expert Forum is organised as part of a delegation visit of British AI experts who will be in Berlin on 2nd and 3rd December. The delegates will also attend the Expert Forum.

While the objective of the Expert Forum is to facilitate technical discussions about research currently conducted in the field in particular in Germany and the United Kingdom, participants will also be challenged to think about topics such as future applications or developments in the sector. The Expert Forum will be brought to life by the participants themselves, with different formats allowing active contributions during open roundtables as well as providing food for thought during moderated panel discussions.

On the Science and Innovation Network

The UK Science and Innovation Network (SIN) is a network of specialist officers based overseas whose primary purpose is to build international partnerships, facilitate greater collaboration and promote the UK's strength in science on the global stage. SIN has approximately 100 officers in over 40 countries and territories around the world building partnerships and collaborations in science and innovation. SIN officers work with the local science and innovation community in support of UK policy overseas, leading to mutual benefits to the UK and the host country. In Germany, the SIN team is based in Berlin and Munich.

On Forum Digital Technologies

Forum Digital Technologies (FDT) has recently been launched by the Federal Ministry of Economic Affairs and Energy (BMWi) to serve as a knowledge and networking hub for selected research projects, innovations and products in the field of digital technologies in Germany. FDT promotes exchange both nationally and internationally especially in the fields of artificial intelligence, big data, internet of things as well as security and trust issues. Furthermore, it provides a directory of the German digital technology landscape.

Logistics

Date and Time

Tuesday, 3rd December 2019
09:00-16:00

Venue

Forum Digitale Technologien
Fraunhofer Heinrich Hertz Institut
Salzufer 6 / Entrance via Otto-Dibelius-Straße
10587 Berlin

Please note that in order to participate in the Expert Forum, prior registration is required (see below)!

Programme

Event moderated by **Dr. Anne Schwerk,** Project Manager AI Health, Intelligent Analytics of Massive Data, DFKI GmbH

From 08:30   Arrival of Participants and Registration

Part I: Setting the Scene

09:00-09:15   **Welcome Remarks**
- · **Julia Gundlach,** International Cooperation, Forum Digital Technologies
- · **Dr. Olaf Kranz,** Head of Science & Innovation Germany, Switzerland and Austria
- · **Dr. Anne Schwerk,** Project Manager AI Health, Intelligent Analytics of Massive Data, DFKI GmbH

09:15-09:45   **Round of Introduction: Participating Organisations and Researchers**

09:45-10:15   **Keynote & Q&A: "German AI Strategy and Relevant Current Developments in the German Health Sector"**
- · **Nick Schneider**, Head of Division 511 "New Technologies and Data Use", Federal Ministry of Health

10:15-10:30   Coffee Break

Part II: The Role of AI in Digital Medicine and Surgery

10:30-11:40   **Keynote: Research in Digital Minimally Invasive Surgery at Fraunhofer HHI**
- · **Jean-Claude Rosenthal**, Researcher, Fraunhofer HHI
- · **Eric Wisotzky,** Researcher, Fraunhofer HHI

             Keynote: Research at Edinburgh Centre for Robotics
- · **Dr. Subramanian Ramamoorthy**, Associate Professor, School of Informatics, University of Edinburgh

             Discussion: "The Role of AI in Digital Medicine and Surgery – Underestimated or Overrated?"
- · **Dr. Subramanian Ramamoorthy**
- · **Jean-Claude Rosenthal**
- · **Eric Wisotzky**
- · Discussion led by: **Dr. Anne Schwerk**

Part III: Data-Driven Medicine and Surgery, and its Data Challenges

11:40-12:50   **Keynote: The Proliferation of Health Data – Learnings from the Frontline**
- · **Nisha Shah**, Researcher, Nuffield Department of Population Health, University of Oxford

             Keynote: No Good Data, No Good Prediction Models
- · **Diogo Telmo Neves**, Researcher, German Research Centre for AI (DFKI)

             Discussion: "The Future of Big Health Data – And How to make to Make it Great (Again)"
- · **Nisha Shah**
- · **Diogo Telmo Neves**
- · Discussion led by: **Dr. Anne Schwerk**

12:50-13:50   Networking Lunch

13:50-14:20   **Tour of Forum Digital Technologies Showroom**
Guided tour of selected project demonstrators developed in one of the [Development of Digital Technologies](#) programmes of the Federal Ministry of Economic Affairs and Energy

Part IV: The Future of AI in Minimally Invasive Surgery

14:20-15:50   *Two roundtable discussion on likely future development and trends in the field. Participants will be able to select topics among a selection of predefined questions shared by participants ahead of the Expert Forum. Topics to be discussed will be voted on via an online tool and may focus on issues such as future research questions, specific technologies, human-robot interaction etc.*

15:50-16:00   **Closing Remarks & Next Steps**

16:00-17:00   *Optional:* Networking of Participants

Target Group and Participants

For the Expert Forum, participants may have the following backgrounds

·   Researchers and scientists working in areas relevant to the Forum such as digital medicine in general or artificial intelligence, robotics, computational imaging, computer vision etc. in particular.
·   Medical practitioners with an interest in minimally invasive surgery and/or artificial intelligence.

The UK delegation will include the following institutions

·   **University of Leeds:** UKRI Centre for Doctoral Training in AI for Medical Diagnosis and Care; School of Computing
·   **University of Edinburgh:**
   ▪   School of Informatics; Edinburgh Centre for Robotics
   ▪   Bayes Centre; School of Informatics
·   **Alan Turing Institute:** Health and Medical Science Programme Representative
·   **University of Cardiff:** School of Computer Science & Informatics
·   **University of Oxford:** Centre for Health, Law and Emerging Technologies (HeLEX)

To Register

To register, please send an email with the below information to Fran Bormann, Science and Innovation Officer at the British Embassy, franziska.bormann@fco.gov.uk.

·   Email subject line: *Expert Forum on "AI in Minimally Invasive Surgery & Treatment"*
·   Email to include: Full name, position and name of organisation/institution
·   Deadline for registrations: Wednesday, 27th November

Please note that participation in the Expert Forum is subject to final confirmation. All successful participants will be notified.

We welcome topic proposals for the Expert Forum by all interested participants!