DWIH Tokyo

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AU JAPON

Japanese-German-French Forum on AI and Healthcare – Quality Standards for AI Applications in Healthcare and Joint Database for Medical Data

2 December 2019, 9:15 – 18:30

German Culture Centre (7-5-56 Akasaka, Minato-ku, Tokyo)

Website: **www.dwih-tokyo.org/healthcare**

Introduction

AI in healthcare is expected to support the P4 medical approach of predictive, preventive, personalised and participatory treatment and to reduce time, back-office administration and financial burdens, consequently allowing for a more sustainable and affordable healthcare system. Quality assurance for AI applications in healthcare and integrated databases for medical data are steps on the way to improved health services.

In the trilateral forum, researchers, practitioners, entrepreneurs, regulators and policy makers will discuss a guideline for quality assurance of AI applications in healthcare and exchange views on national approaches to an integrated database for medical data. Following panel discussions involving experts from Japan, Germany and France, the audience will be able to engage in group work to jointly develop and reflect on various use cases.

The forum is being held by the German Centre for Research and Innovation Tokyo (DWIH Tokyo) and co-organised by the French Embassy in Japan. The Ministry of Economy, Trade and Industry (METI) is acting as the official supporter of the forum in Japan.

The AI and Healthcare Forum serves as a follow-up to Artificial Intelligence – International Research and Applications: 1st Japanese-German-French DWIH Symposium (November 2018), during which participants issued a joint statement on intensified collaboration in AI.

About the DWIH Tokyo

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The German Centre for Research and Innovation Tokyo (DWIH Tokyo) is a forum for German universities, non-university research institutions and research-based companies in Japan.

The DWIH Tokyo represents and promotes Germany as a location for science, research and innovation, supports knowledge exchange concerning German and Japanese science, research, and innovation landscapes, communicates between actors of both countries, and thus creates the preconditions for research cooperation. It serves as a two-way, interdisciplinary connection between Japan and Germany, and advocates exchange concerning future challenges. To achieve its mission, it relies on its research-based partners in Germany, who facilitate and shape the work of the DWIH on the ground.

www.dwih-tokyo.org

Programme

08:45 – 09:15	Registration
09:15 – 10:15	**Opening**
09:15 – 09:25	Welcome **Dorothea Mahnke** / Director, German Centre for Research and Innovation Tokyo (DWIH Tokyo)
09:25 – 10:15	Plenary Speeches **Prof. Dr. Veronika von Messling** / Director General, Life Sciences Division, German Federal Ministry of Education and Research (BMBF) **Yoshihide Esaki** / Deputy Director-General, Healthcare and Medical Policy, Ministry of Economy, Trade & Industry (METI); Ministry of Health, Labour and Welfare (MHLW); Cabinet Secretariat, Government of Japan **Dr. Isabelle Adenot** / Board Member, Chair for Medical Device and Health Technology Evaluation Committee, Haute Autorité de Santé (HAS)
10:15 – 13:00	**Session I: Quality Standards for AI in Healthcare**
10:15 – 11:30	Panel Discussion Chair: **Prof. Dr. Klaus Juffernbruch** / Professorship for Health & Social Management, FOM University; President of Expert Group "Intelligent Networks in Healthcare" at German National Digital Summit Speakers: **Dr. Kiyoyuki Chinzei** / Deputy Director, Health Research Institute; Group Leader, Interface Material Research Group at National Institute of Advanced Industrial Science and Technology (AIST); Adjoint Professor, School of Engineering, Tokyo Denki University **Corinne Collignon** / Deputy Head, Medical Device Assessment Department, French National Authority for Health, HTA Division **Julia Hagen** / Director Regulatory & Politics, Health Innovation Hub (Think Tank of the German Federal Ministry of Health)
11:30 – 11:45	Coffee Break
11:45 – 13:00	Group Work *Chances and Challenges of AI in a Hospital Setting (WG 1)* **Moderator: Prof. Dr. Satoru Miyano** / Director, Human Genome Center, Institute of Medical Science, The University of Tokyo; Sub-Program Director, AI Hospital *AI in Clinical Trials (WG 2)* **Moderator: PD Dr. Thomas Bocklitz** / Head of Department Photonic Data Science, Leibniz Institute of Photonic Technology (Leibniz-IPHT); Member of Leibniz Research Alliance Health Technologies *e-Health: Big Data Mining for Personalised Care Path (WG 3)* **Moderator: Hugo Crochet** / Performance and Quality Project Manager, Centre Léon Bérard
13:00 – 14:00	Lunch Break and Networking
14:00 – 16:45	**Session II: Joint Database for Medical Data**
14:00 – 15:15	Panel Discussion Chair: **Dr. Kazuhiro Sakurada** / Deputy Program Director, RIKEN Medical Sciences Innovation Hub Speakers: **Prof. Dr. Ryuichi Yamamoto** / Chief Director, Medical Information System Development Center (MEDIS); Invited Professor, Jichi Medical University **Prof. Dr. Thomas Ganslandt** / Executive Director, Heinrich-Lanz-Center for Digital Health, Medical Faculty Mannheim, Ruprecht-Karls-University Heidelberg; Speaker, Interoperability Working Group of the German Medical Informatics Initiative; Board Member, Technology and Method Platform for Networked Medical Research (TMF e.V.) **Hugo Crochet** / Performance and Quality Project Manager, Centre Léon Bérard

Programme

15:15 – 15:30	Coffee Break
15:30 – 16:45	**Group Work** *Safe and Transparent Data Sharing System (WG 4)* **Moderator: Eugene Satoshi Takagi** / Founder and CEO, Bio-Xcelerator K.K. *Vision of a Trilateral Database as Base for Innovative Entrepreneur Designs (WG 5)* **Moderator: Sirko Pelzl** / CEO, apoQlar GmbH; CEO, theBlue.ai GmbH *Quality of Medical Data (WG 6)* **Moderator(s): Prof. Dr. David Gruson** / Health Director, Jouve; Founder, Ethik-IA; Health Chair, Sciences Po Paris and **Prof. Dr. Michel Bera** / Chair, Risk Statistical Modeling, Conservatoire National des Arts et Métiers (CNAM)
16:45 – 17:00	(Change back to Hall)
17:00 – 17:30	**Group Work Snapshots and Sneak Preview**
17:00 – 17:20	**Group Work Snapshots** Summary and highlights presented by moderators of group work
17:20 – 17:30	**Sneak Preview "Connecting Europe and Japan – Intelligent Healthcare Applications"** **Sophie de Bentzmann** / Counselor, French Embassy in Japan: Japanese-German-French Expert Workshop on AI and Healthcare on 3 Dec 2019 **Hiroshi Iwamura** / Director Japan, German Trade and Industry (GTAI): 15th Japan-Germany Industry Forum: Artificial Intelligence in Healthcare – Trends and Business Opportunities on 3 Dec 2019 **Dr. Lucas Witoslawski** / Chief Operating Officer, German Chamber of Commerce and Industry in Japan (AHK Japan): TechBIZKON III: Digital Health beyond 2020 – Connecting Start-ups, Corporates and VCs on 4 Dec 2019
17:30 – 18:30	**Closing Panel**
17:30 – 18:25	**Panel Discussion** Co-Chairs: **Dr. Kazuhiro Sakurada** / Deputy Program Director, RIKEN Medical Sciences Innovation Hub **Prof. Dr. Klaus Juffernbruch** / Professorship for Health & Social Management, FOM University; President of Expert Group "Intelligent Networks in Healthcare" at German National Digital Summit Panelists: **Prof. Dr. Michihiko Minoh** / Executive Director, RIKEN **Prof. Dr. Veronika von Messling** / Director General, Life Sciences Division, German Federal Ministry of Education and Research (BMBF) **Dr. Isabelle Adenot** / Board Member, Chair for Medical Device and Health Technology Evaluation Committee, Haute Autorité de Santé (HAS)
18:25 – 18:30	**Closing** **Dorothea Mahnke** / Director, German Centre for Research and Innovation Tokyo (DWIH Tokyo)

Quality Standards for AI in Healthcare

Session Outline:
As Artificial Intelligence is maturing an increasing number of systems is making the transition from research to product for clinical use.
Currently there are no standards in place that regulators can use for the quality assessment of clinical AI systems.
Most tools are approved on a case-by-case basis and are based on retrospective data.
We need to implement standards for the evaluation of AI systems that ensure the quality of AI diagnoses and treatment recommendations.
Possible elements of a Regulatory Quality Framework to ensure patient safety will be discussed.

Panel Discussion

Developing a Guideline for Quality Standards
Chair: Prof. Dr. Klaus Juffernbruch
Professorship for Health & Social Management, FOM University; President of Expert Group "Intelligent Networks in Healthcare" at German National Digital Summit

Speakers:

AI-based SaMD and Medical Systems in Japan: Towards Social Acceptance
Dr. Kiyoyuki Chinzei
Deputy Director, Health Research Institute; Group Leader, Interface Material Research Group at National Institute of Advanced Industrial Science and Technology (AIST); Adjoint Professor, School of Engineering, Tokyo Denki University

Evaluation of Medical Devices which use Artificial Intelligence
Corrinne Collignon
Deputy Head, Medical Device Assessment Department, French National Authority for Health, HTA Division

Regulating AI in Healthcare and Perspectives for Reimbursement
Julia Hagen
Director Regulatory & Politics, Health Innovation Hub (Think Tank of the German Federal Ministry of Health)

Group Work

Chances and Challenges of AI in a Hospital Setting (WG 1)
Moderator: Prof. Dr. Satoru Miyano
Director, Human Genome Center, Institute of Medical Science, The University of Tokyo; Sub-Program Director, AI Hospital

AI in Clinical Trials (WG 2)
Moderator: PD Dr. Thomas Bocklitz
Head of Department Photonic Data Science, Leibniz Institute of Photonic Technology (Leibniz-IPHT); Member of Leibniz Research Alliance Health Technologies

e-Health: Big Data Mining for Personalised Care Path (WG 3)
Moderator: Hugo Crochet
Performance and Quality Project Manager, Centre Léon Bérard

Joint Database for Medical Data

Session Outline:
Medicine today faces increasingly costly demands. But medical services cannot expand indefinitely, as the financial resources are ultimately limited. Due to disease heterogeneity, standard treatments are effective in only a subset of the patient population. Efforts to halt a disease and thereby avert complications or to prevent onset altogether are not fully implemented. For a sustainable healthcare system, we need a new approach to medicine that is predictive, preventive, personalised and participatory (4P medicine). The move from hypothesis-driven to data-driven biomedical research using AI will bring 4P medicine to fruition. The introduction of a data-driven approach requires an orchestrated data platform to help researchers, healthcare professionals and other stakeholders to collaborate as efficiently as possible.

Panel Discussion

Deep Clinical Phenotyping for Predictive, Preventive and Personalised Medicine
Chair: Dr. Kazuhiro Sakurada
Deputy Program Director, RIKEN Medical Sciences Innovation Hub

Speakers:

Privacy and Public Benefit in Using Large-Scale Health Databases in Japan
Prof. Dr. Ryuichi Yamamoto
Chief Director, Medical Information System Development Center (MEDIS); Invited Professor, Jichi Medical University

Collaborative Approaches to Interoperable, Secure Medical Data Sharing
Prof. Dr. Thomas Ganslandt
Executive Director, Heinrich-Lanz-Center for Digital Health, Medical Faculty Mannheim, Ruprecht-Karls-University Heidelberg; Speaker, Interoperability Working Group of the German Medical Informatics Initiative; Board Member, Technology and Method Platform for Networked Medical Research (TMF e.V.)

Hugo Crochet
Performance and Quality Project Manager, Centre Léon Bérard

Group Work

Safe and Transparent Data Sharing System (WG 4)
Moderator: Eugene Satoshi Takagi
Founder and CEO, Bio-Xcelerator K.K.

Vision of a Trilateral Database as Base for Innovative Entrepreneur Designs (WG 5)
Moderator: Sirko Pelzl
CEO, apoQlar GmbH; CEO, theBlue.ai GmbH


Quality of Medical Data (WG 6)
Moderator(s): Prof. Dr. David Gruson
Health Director, Jouve; Founder, Ethik-IA; Health Chair, Sciences Po Paris and
Prof. Dr. Michel Bera
Chair, Risk Statistical Modeling, Conservatoire National des Arts et Métiers (CNAM)

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