Ministry of Culture and Science
of the State of
North Rhine-Westphalia

Grand Challenges: Answers from North Rhine-Westphalia

AI made in NRW:
Sustainability and Trust for Artificial Intelligence
Technologies

Thursday, 29 October 2020
12:00 to 13:30

Agenda of the online-event

12:00   **Welcome address**

Isabel Pfeiffer-Poensgen
Minister of Culture and Science of the State of North Rhine-Westphalia

12:10   **Keynote**

Eric Badiqué
Adviser for Artificial Intelligence (CNECT.ADV02) within the DG CONNECT, European Commission

12:25   **Introduction and Moderation**

Stefan Wrobel
Director of the Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS), University of Bonn

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12:30 **Presentations**

Katharina Morik
Technical University of Dortmund

"Trustworthy machine learning"

Machine learning optimizes diverse systems. How can learned models be made understandable and guarantees for the behavior be given?

Thorsten Holz
Ruhr University Bochum

„IT Security and Machine Learning"

How can typical IT security problems be solved with the help of ML algorithms? How can we make ML-algorithms robust against attacks?

Barbara Hammer
Bielefeld University

„Cooperative Intelligence"

How can AI enable the cooperation of man and machine? Which challenges have to be addressed to ensure human sovereignty in the use of AI?

13:15 **Q&A Session**

The conference will be held in English.

Please register [here](#).

The event will be broadcast live with Zoom and on our YouTube channel:
https://www.youtube.com/channel/UCrq9mVOJU2ocI7kh0UE_c0Q

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AI made in NRW:
Sustainability and Trust for Artificial Intelligence Technologies

As a key technology of digital change, AI is of central importance for economy, science and society: intelligent components improve the quality and efficiency of existing processes along the entire value chain and open up new markets. AI technologies support solutions for central social problems, for example through intelligent mobility concepts or computer-supported drug development. AI applications such as intelligent language assistants or machine translation are omnipresent in society. In order to make this development safe, sustainable and for the benefit of mankind, a wide range of technological and societal challenges have to be met.

The digital strategy of North Rhine-Westphalia is guided by the triad of "excellence in research and education", "success in business" and "ethics in implementation". With its rich ecosystem, NRW ideally reflects the heterogeneous demands placed on AI and can draw on the expertise of renowned scientists, outstanding flagship projects and a strong industry and start-up scene. Research topics range from concepts to enable AI as a service, privacy, security and explainability of AI models, to cognitive compatibility and societal implications.

The Competence Center Machine Learning Rhine-Ruhr (ML2R) bridges the gap between basic research in machine learning and the specific requirements of companies. In the Leading-Edge Cluster Intelligent Technical Systems East Westphalia-Lippe (it's OWL) 200 companies, research institutions and organisations develop innovative solutions for digital transformation. The Aachen Center of Excellence Internet of Production (IoP) is dedicated to the challenges of digitalization in production. The role of AI for IT security is being investigated at the Center of Excellence CASA at the Ruhr University Bochum. The Centre for Advanced Internet Studies (CAIS) dedicates itself in an interdisciplinary team to the societal challenges of digitalization. The Competence Platform for Artificial Intelligence (KI.NRW), which was established by the state of North Rhine-Westphalia, focusses and supports the development of AI competencies and AI applications throughout NRW.

The aim of the event is to provide an overview of the AI research landscape in NRW, which focuses on the sustainable development of AI processes in industry and society for the benefit of mankind and thus contributes substantially to a trustworthy AI as envisioned by the EU.

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The Grand Challenges range from climate change to the ageing society to the efficient use of energy resources – issues of great complexity that require the full commitment of research and innovation across Europe. North Rhine-Westphalia is putting in considerable effort, aiming in particular at strengthening international links and utilising the instruments provided by the European Research and Innovation Area.

Grand Challenges: Answers from North Rhine-Westphalia
The conference series is directed to European decision-makers, with North Rhine-Westphalia presenting its proposals for addressing the key issues. There will be ample opportunity for dialogue amongst Europe's political leaders, innovative business operators and researchers.

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