Alexander von
HUMBOLDT
STIFTUNG

PROGRAMME

The "what, how and why" of AI

Artificial intelligence has become one of the hottest topics not only in academia and industry, but also in politics and society. Markedly different views exist on what should be counted as AI, which directions should be followed in AI research and applications, and how AI can be used to bring benefits to industry and society, rather than causing risk and disruption.

What kind of AI do we need and should we want, especially in realms where AI systems physically interact with their environment and with us? How can we best overcome the limitations and weaknesses of existing AI systems, such as ChatGPT? How can we separate hype and excitement from serious scientific and technological progress? And why should we pursue the development and broad use of artificial intelligence in the first place?

These and other timely questions will be discussed by Humboldt award winners from around the world, who are deeply involved in shaping the development of AI and its applications. The Bonn Humboldt Award Winners´ Forum offers a unique opportunity, especially for early-career scientists, to obtain a broad view of artificial intelligence, which covers diverse scientific disciplines including computer science, cognitive science, philosophy and several other disciplines.

Conference Language: English

Scientific Committee:

Holger Hoos

Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen, Germany

Oliver Brock

Technische Universität Berlin, Germany

Vincent Müller

Friedrich-Alexander Universität (FAU) Erlangen-Nürnberg, Germany

Sponsored by

Federal Ministry
of Research, Technology
and Space

WEDNESDAY, 22 October 2025

from 1:00 p.m.	Arrival and registration of the participants	*Kranz Parkhotel Siegburg Mühlenstraße 32-44, 53721 Siegburg*
4:00 p.m.	Bus transfer to the University of Bonn	*Hotel lobby*
5:00 p.m.	**Opening Ceremony**	*University of Bonn, Festsaal*

Welcome and Opening

Michael Hoch

Rector of the University of Bonn

Nicole Unterseh

Mayor of Bonn

Markus Zanner

Secretary General

Alexander von Humboldt Foundation

Holger Hoos

Alexander von Humboldt Professor for Artificial Intelligence

RWTH Aachen, Germany

Keynote Lecture "Reasonable AI"

Kristian Kersting

Technische Universität Darmstadt, Germany

Panel Discussion (Moderation: Holger Hoos)

Milica Gašić

Heinrich-Heine-Universität Düsseldorf, Germany

Teresa Head-Gordon

University of California, Berkeley, USA

Kristian Kersting

Technische Universität Darmstadt, Germany

afterwards	**Reception**
from 9:00 p.m.	Transfer to the hotel

THURSDAY, 23 October 2025

from 8:00 a.m.	Registration	*Kranz Parkhotel, hotel lobby*
9:00 a.m.	**Welcome and Introduction by the Scientific Committee**	*Room Humperdinck*

Scientific Lectures – Panel I

9:15 a.m.	**"Smart Advice: Intelligent Agents Assisting Humans in the Super AI Era"** **Sarit Kraus** Bar-Ilan University, Ramat-Gan, Israel
10:00 a.m.	**"Opportunities and Pitfalls of Physically Interfacing Intelligent Robotics with Human Users"** **Heike Vallery** RWTH Aachen, Germany

10:45 a.m.	Coffee break	*Conference foyer*

11:15 a.m.	**"Safe Physical AI"** **André Platzer** Karlsuher Institut für Technologie, Germany
12:00 p.m.	**"Moving the Frontiers; The Sponsorship Philosophy of the Alexander von Humboldt Foundation"** **Steffen Mehlich** Alexander von Humboldt Foundation

12:30 p.m.	Lunch	*Hotel restaurant*
2:00 p.m.	**Flashtalks**	*Room Humperdinck*

"Embodied Artificial Intelligence for Autonomous, Social Human-robot Interaction with an Android Robot in a Museum"
Christian Werner Becker-Asano
Hochschule der Medien (HdM), Stuttgart, Germany

"Humans Actively Frame Their Thoughts – AI Not, Yet"
Martin Butz
Universität Tübingen, Germany

"A Computer-Driven Strategy for Materials Discovery"
Soumen Ghosh
Indian Institute of Technology Madras, Chennai, India

"Bias or Factual Recall? Understanding How LLMs Compare Entities"
Jae Hee Lee
Universität Hamburg, Germany

"Emotional Signs: Towards the Study of Affective Computing for Sign Language"
Cristina Luna-Jiménez
Universität Augsburg, Germany

"Opinion Dynamics over Migration Networks"
Lörinc Marton
Zuse Institut Berlin (ZIB), Germany

"Human–AI Interaction: Between Tools and Partners"
Wieland Müller
Universität Rostock, Germany

"Investigating Optimal Approaches in Delay-Based Reservoir Computing for Image Classification and Denoising"
Jimmi Herve Talla Mbe
Technische Universität Ilmenau, Germany

"CogSteer: Cognition-Inspired Selective Layer Intervention for Efficiently Steering Large Language Models"
Xintong Wang
Universität Hamburg, Germany

"Modeling Emergent Behaviors in Social Networks through Opinion Dynamics"
Yu Xing
RWTH Aachen, Germany

2:30 p.m.	**Poster Session**
3:30 p.m.	Coffee break *Conference foyer*
4:00 p.m.	**"AI and the Future of Medicine"** **Daniel Rückert** Technische Universität München, Germany

| 4:45 p.m. | **"Machine Learning and Artificial Intelligence for (Bio) Chemistry"** **Teresa Head-Gordon** University of California, Berkeley, USA | |

| 5:45 p.m. | Dinner | *Hotel restaurant* |

| 7:00 p.m. | Joint walk to Stadtmuseum | *Meeting point: hotel lobby* |

| 7:30 p.m. | **Dialogue Concert** **"Gödel, Escher, Bach: Perspectives and (Im)Possibilities"-** A playful exploration of Music, Arts and Mathematics This unique dialogue concert features contemporary works by the well-known English composer Graham Waterhouse as well as reflections on the works of Kurt Gödel, Maurits Cornelis Escher and Johann Sebastian Bach. | *Stadtmuseum Siegburg* |

| 9:00 p.m. | **Reception** | |

| 10:00 p.m. | Walk back to the hotel | |

FRIDAY, 24 October 2025

| from 8:00 a.m. | Registration | *Kranz Parkhotel, hotel lobby* |
| | **Scientific Lectures – Panel II** | *Room Humperdinck* |

| 9:00 a.m. | **"Powering Robotics with AI"** **Angela Schoellig** Technische Universität München, Germany | |

| 9:45 a.m. | **"Human-AI Collaboration"** **Sumit Gulwani** Microsoft Corporation, USA | |

| 10:30 a.m. | Coffee break | *Conference foyer* |

11:00 a.m. **"Guided data exploration with (semi-)supervised manifold learning"**
Guy Wolf
Université de Montréal, Canada

11:45 a.m. **"AI-Driven Personalization to Support Human-AI Collaboration"**
Cristina Conati
University of British Columbia, Vancouver, Canada

12:30 p.m. Lunch *Hotel restaurant*

2:00 p.m. **Panel Discussion** *Room Humperdinck*

"AI Bust or Boom – and for Whom"

Oliver Brock (Co-Moderator)

Technische Universität Berlin, Germany

Vincent Müller (Co-Moderator)

FAU Erlangen-Nürnberg, Germany

Dirk Helbing

ETH Zürich, Switzerland

Angela Schoellig

Technical University of Munich, Germany

Toby Walsh

University of New South Wales, Kensington, Australia

Soumaya Zaghbani

Max Planck Institute of Biophysics, Frankfurt, Germany

3:30 p.m. Coffee break *Conference foyer*

4:00 p.m. **Section 1 –** *Room Wolsberg* | **Section 2 –** *Room Brückberg*

"What Will You Use Those Extra GPUs For? Designing Scalable Optical Networks for an AI-Driven World"
Polina Bayvel
University College London (UCL), United Kingdom

"Is Neuromorphic Computing AI's Next Leap?"
Renan Cipriano Moioli
Universität Münster, Germany

4:20 p.m.	**"AI and the Future of Creativity"** **Toby Walsh** University of New South Wales, Kensington, Australia	**"Learning, reasoning, and structural generalization"** **Hector Geffner** RWTH Aachen, Germany
4:40 p.m.	**"Clustering Algorithms and facility location"** **Naveen Garg** Indian Institute of Technology (IIT) Delhi, India	**"Combining LLMs with constraint solvers: experience report"** **Etienne Lozes** Université Côte d'Azur, France
5:00 p.m.	**"Learning to Collaborate in Human-AI Teams"** **Stefano V. Albrecht** DeepFlow, London & Nanyang Technological University, Singapore	**"AI applications in cardiac surgical planning"** **Xiaowei Xu** Leibniz-Institut für Analytische Wissenschaften -ISAS- e.V. Dortmund, Germany
5:20 p.m.	Break	
6:30 p.m.	Reception	*Kranz Parkhotel, conference foyer*
7:00 p.m.	**Dinner with Dinner Talk** **"The Digital Revolution for Dessert"** **Dirk Helbing** ETH Zürich, Switzerland	*Room Humperdinck*

SATURDAY, 25 October 2025

10:20 a.m.	Meeting in the hotel lobby	*Kranz Parkhotel*
10:30 a.m.	Transfer by bus to the pier in Bonn	
11:30 a.m.	**Boat Tour on the Rhine with Lunch**	*Boat "Filia Rheni"*
1:30 p.m.	Bus transfer to Government Bunker	

2:30 p.m.	**Guided Tour at the Govern-ment Bunker**	*Regierungsbunker* *Bad Neuenahr-Ahrweiler*
4:30 p.m.	Bus transfer to Dagernova winery	
5:00 p.m.	**Reception and Guided Tour through Production Hall of Wine Manufactory Dagernova**	*Dagernova Winery*
Afterwards	**Wine Tasting and Farewell Dinner**	*Restaurant Culinarium*
9:00 p.m.	Bus transfer back to the hotel	
approx. 9:50 p.m.	Arrival at the hotel	

SUNDAY, 26 October 2025

until 10:00 a.m.	Check out and individual departure

GENERAL INFORMATION

Organiser

Alexander von Humboldt Foundation, Bonn, Germany

Organisation

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Hotel

Kranz Parkhotel
Mühlenstraße 32 - 44, 53721 Siegburg
Tel.: +49 (0)2241 5470

Hotel Reservation

Hotel rooms including breakfast are reserved bindingly for all participants who are supposed to arrive in Bonn. Please check out of your room on the departure day no later than 12:00 p.m. If you wish to arrange for a late departure, please contact the Welcome Desk. Please note that all extra charges (e.g. for telephone, parking, taxi, room service) are at your own expense.

Meals

Breakfast will be served between 6:30 a.m. and 10 a.m. Organised meals begin with the reception on 22 October 2025 and end with dinner on 25 October 2025.

WiFi Access in the Hotel

WiFi access is available free of charge at the hotel. You can get further information at the Welcome Desk and the hotel reception.

Smoking

Please note that smoking is not permitted in the hotel.

Disclaimer

Please note that participation takes place at your own risk. We ask for your understanding that neither the Alexander von Humboldt Foundation nor Kongress- und Kulturmanagement GmbH are liable for any losses, accidents or damages, irrespective of which cause, to people and property during travel as well as during the conference.

Photographer during the Conference

In general, the event is open to the press. We would like to inform you that employees of the Foundation will be taking photographs during the event. The photographs and recordings taken may be published by the Alexander von Humboldt Foundation for the purpose of information and public relations work (on- and offline). They will not be used for commercial purposes. If you do not agree with the publication of photographs or live streams in which you can be identified, please inform us by sending an email to presse@avh.de.

Name Tags

Upon registration, you will receive a name tag. Please wear it during the entire conference, it will make it easier for all participants to address each other.

How to Recognise the Participants

🟨	**Yellow**	Research Award Winners
🟩	**Green**	Research Fellows
🟦	**Blue**	Alumni
⬜	**Beige**	Academic Hosts
⬛	**Grey**	Members of the Selection Committees
🟧	**Orange**	Spouses and Partners
⬜	**White**	Guests
🟪	**Bordeaux**	Staff of the Alexander von Humboldt Foundation