



HERRENHAUSEN CONFERENCE,

OCTOBER, 12-14, 2022

HERRENHAUSEN PALACE, HANOVER, GERMANY

AI AND THE FUTURE  
OF SOCIETIES

ABSTRACTS:



# AI AND THE FUTURE OF SOCIETIES

The dynamic developments in research and application fields of artificial intelligence (AI) are about to fundamentally change societies. AI is increasingly permeating all areas of life. This concerns global issues, such as sustainable system transformation or use of self-learning algorithms in work environments and public administration, as well as areas of private life, such as care for the elderly or individual learning. Simultaneous to the manifold opportunities associated with the use of AI, this development poses enormous challenges and risks. Questions arise for all societies as to what effects can be expected in the further course of the digital revolution.

In the context of this Herrenhausen Conference, central aspects and application areas of artificial intelligence will be discussed from an interdisciplinary perspective. What effects can be expected for political and economic systems? What are the consequences, for instance, for the future of mobility, labor relations and, not least, social inequality at different levels? The challenge of the future for all societies is: How can people use AI applications for their benefit and how can all parts of societies participate in the benefits of AI?

# PROGRAMM

## WEDNESDAY, OCT 12, 2022

9:30 AM REGISTRATION AND COFFEE

10:00 AM TUTORIAL

*Trustworthy AI - The European Approach to Ethical AI*  
FREDRIK HEINTZ, University Linköping, Sweden

*Chair:* ULRIKE BISCHLER, Volkswagen Foundation, Hanover, Germany

11:15 AM SHORT COFFEE BREAK

11:30 AM WELCOME AND KEYNOTE

*Words of Welcome*  
ADELHEID WESSLER, Volkswagen Foundation, Hanover, Germany

*AI and the Drive towards a Cybernetic Society*  
ROBERTO SIMANOWSKI, PUC Pontifical Catholic University Rio, Brazil & Berlin

*Chair:* SEBASTIAN MATTHES, Volkswagen Foundation, Hanover, Germany

1:00 PM LUNCH

**2:10 PM** SESSION 1  
**AI and Social Inequality**

*Open AI and Digital Inclusion*

DR. RUTH SCHMIDT

GIZ Deutsche Gesellschaft für Internationale Zusammenarbeit, Bonn, Germany

*AI and Inequality: Quo Vadis?*

DEEPAK KUMAR SAXENA

Indian Institute of Technology, Jodhpur, India

*AI Education and Inequality*

BRUNO FEIJO

Pontifical Catholic University (PUC) Rio, Brazil

*Chair:* CLAUDE DRAUDE, University of Kassel, Germany

**3:40 PM** FOUR LIGHTNING TALKS

*Regulating the AI ecosystem and data value chains across borders and domains*

FREYJA VAN DEN BOOM, University of Ottawa, Canada

*A Critique of Customer Service Chatbots*

NORA F. LINDEMANN, University of Osnabrück, Germany

*AI, Big Data and Digital Capitalism versus Climate*

PAUL SCHÜTZE, University of Osnabrück, Germany

*The Chinese Model of the State-led Development of Artificial Intelligence Technologies*

ARMIN SCHEER, Copenhagen Business School, Denmark

*Chair:* ANORTHE WETZEL, Volkswagen Foundation, Hanover, Germany

**4:00 PM** COFFEE BREAK & POSTER SESSION

4:30 PM SESSION 2  
Challenges of Automated Decision-Making

*Deciding about, by and together with Algorithmic Decision-Making Systems*

JULIA FELFELI

Zeppelin University of Friedrichshafen, Germany

*Multi-Dimensional Discrimination: An essential but overlooked legal and Algorithmic Challenge*

ARJUN ROY, JAN HORSTMANN

Leibniz-University of Hannover, Germany

*Introducing the XIC (Explainability in Context) Framework*

LENA KÄSTNER, MARKUS LANGER

Bayreuth University, Germany

*Co-Creating Better AI – The AI FORA Approach*

ELISABETH SPÄTH, DAVID WURSTER

Johannes Gutenberg University Mainz, Germany

*Chair:* BURKHARD SCHAFFER, University of Edinburgh, Scotland

6:30 PM DINNER

# THURSDAY, OCT 13, 2022

## 9.00 AM SESSION 3 AI and the Future of Work

*AI – a Technology between hyperbolic Narratives and everyday Practices*

ULI MEYER

Johannes-Kepler-University Linz, Austria

*Promoting human-centered AI in the Workplace*

MARTIN KRZYWDZINSKI

WZB Wissenschaftszentrum Berlin, Germany

*AI & social Innovation for more Inclusion in Africa*

BOUCHRA RAHMOUNI BENHIDA

Mohammed VI Polytechnic University, Morocco

*Chair:* MARIJA SLAVKOVIC, University of Bergen, Norway

## 10:30 AM COFFEE BREAK

## 11:00 AM SESSION 4 AI in Medicine and Eldercare

*Rethinking Care Robotics – Process and Outcomes*

EVA HORNECKER

Bauhaus University Weimar, Germany

*AI-based Framework for Prostate Cancer Precision Oncology*

JAN KORBEL

European Molecular Biology Laboratory Heidelberg, Germany

*How Accuracy and Explainability of Diagnostic Advice Affect Physicians*

SUSANNE GAUBE

Ludwig-Maximilians-University Munich, Germany

*Chair:* SIGRID STERCKX, University of Ghent, Belgium

**12:30 PM** LUNCH

**1:30 PM** SESSION 5  
AI and Youth

*Educating and Empowering Students towards a Conscious Use of Social Media*

DAVIDE TAIBI

CNR-ITD Palermo, Italy

JOHANNA SCHÄWEL

Hochschule Ruhr West, Bottrop, Germany

*User's Understanding of Intelligent Machines in Everyday Life and How to Foster It*

NICOLE KRÄMER

University Duisburg-Essen, Germany

*Curiosity in Free Play: How Children and Adults Explore in Absence of External Rewards*

AZZURRA RUGGERI

Max Planck Institute for Human Development, Berlin, Germany

*Chair:* ROSE LUCKIN, University College London, UK

**3:00 PM** COFFEE BREAK



**3:30 PM** SESSION 6  
AI, Communication and Society

*Bots Building Bridges: Theoretical, Empirical, and Technological Foundations for Systems that Monitor and Support Political Deliberation Online*

PHILIPP CIMIANO  
Bielefeld University, Germany

*How AI and Digitalization Undermine Law*

GREGOR NOLL  
University of Gothenburg, Sweden

*Reclaiming Individual Autonomy and Democratic Discourse Online*

PHILIPP LORENZ-SPREEN  
Max Planck Institute for Human Development, Berlin, Germany

*Deliberation Laboratory (DeLab)*

VALENTIN GOLD  
Georg-August-University of Göttingen, Germany

*Chair:* JUSTYNA STYPINSKA, Freie Universität Berlin, Germany

**5:30 PM** WALK IN THE GARDEN

**6:00 PM** DINNER

7:00 PM HERRENHÄUSER FORUM (PUBLIC EVENT)  
Wie KI bestehende Ungleichheitsverhältnisse beeinflusst

PROF. DR. OLAF KRAMER

Seminar für Allgemeine Rhetorik, Universität Tübingen

PROF. DR. MARGRIT SECKELMANN

Institut für Rechtsinformatik, Universität Hannover

PROF. DR. JUDITH SIMON

Professor for Ethics in Information Technology, Universität Hamburg

MATTHIAS SPIELKAMP

AlgorithmWatch

FRIDAY, OCT 14, 2022

9:00 AM SESSION 7  
AI and Sustainability

*Transdisciplinarity for more sustainable AI*

GRISCHA BEIER

Institute for Advanced Sustainability Studies (IASS), Potsdam, Germany

*Democratising Global AI ethics*

ARTHUR GWAGWA

Utrecht University, The Netherlands

*The role of artificial intelligence in achieving the Sustainable Development Goals*

RICARDO VINUESA MOTILVA

KTH Royal Institute of Technology, Stockholm, Sweden

CHAIR: BOLANLE A. OJOKOH, Federal University of Technology, Akure, Nigeria

10:30 AM COFFEE BREAK

**11:00 AM** SESSION 8  
AI and the Future of Societies 2035+

*The future of AI from the margins. Challenges from Latin America*

BEATRIZ BUSANICHE

Fundación Vía Libre, Córdoba, Argentina

*AV is the Mondeo Man, and Alexa is a Girl! (De)Gendering AI*

ADEKEMI OMOTUBORA

University of Lagos, Nigeria

*Chair:* ROBERTO SIMANOWSKI, PUC Pontifical Catholic University Rio, Brazil & Berlin

**12:30 PM** LUNCH & END OF CONFERENCE

## SPEAKERS & CHAIRS

### Grischa Beier

is working at IASS Potsdam, where he is leading the research group on "Digitalization and Sustainability Transformations", which explores the effects of digitalization on industrial sustainability and global value chains. He is also leading the Junior Research Group ProMUT on digitalized Corporate Sustainability Management. His research focuses on social and ecological effects of the broad application of digital technologies in industrial contexts (aka Industry 4.0).

### Beatriz Busaniche

has a degree in Social Communication and a Master in Intellectual Property. She is a professor at the University of Buenos Aires and at the Facultad Latinoamericana de Ciencias Sociales, Flacso. She also directs Fundación Vía Libre, a non-profit civil organization that has been working since 2000 at the intersection of Human Rights and Information and Communication Technologies. In that context, since 2018 she leads the AI ethics team of the Foundation, with projects of public awareness, advocacy and development of tools to identify and mitigate biases in natural language processing artifacts for Latin America.

### Claude Draude

is professor in the Faculty of Social Sciences at the University of Kassel, Germany. Her interdisciplinary research focuses on working with expertise from social sciences and humanities in informatics to foster more just and inclusive IT- / AI-systems design. Claude Draude is also on the director's board of the Research Center for Information System Design (ITeG) and member of the expert committee of the third Gender Equality Report on digital economies of the German government. Other special appointments include advisory board member of the newly established Kassel Institute for Sustainability and scientific expert at the Center Responsible Digitality (ZeVeDi), Technical University Darmstadt.

### Bruno Feijó

is a Full Professor in the Department of Informatics at Pontifical Catholic University of Rio de Janeiro and Director of the Innovation Agency of PUC-Rio. He is the founder and head of the Research Lab on Visualization, Digital TV/Cinema, and Games (ICAD/VisionLab). His areas of research include games, computer graphics, and artificial intelligence. Currently, he is creating the first Brazilian research group in Computational Narratology and Data Storytelling. In education, he has contributed with innovation models to integrate public secondary schools with post-graduation programs in Computer Science. He holds a B.Sc. in aeronautics engineering from the Technological Institute of Aeronautics (ITA), Brazil, and a Ph.D. from the University of London/Imperial College, London, UK.

### Arthur Gwagwa

is a doctoral researcher at the Utrecht University Ethics Institute under the Ethics of Socially Disruptive Technologies program. A registered lawyer in England and Zimbabwe, he researches the philosophical ethics of disruptive technologies, in particular, Digital Foreign Interference: Hew draws non(domination) concept in Republicanism, African ontologies, and Pan-Africanism to analyse the impact of China's Digital Silk Road and the U.S. platform algorithms on Africa. He also teaches Digital Ethics in graduate school. Arthur sits on a number of boards including Stanford Journal of Online Trust and Safety, the Open Technology Fund, and the U.N. Global Pulse Expert Group on AI.

### Fredrik Heintz

is professor of Computer Science at Linköping University, where he leads the Reasoning and Learning lab. His research focus is artificial intelligence especially Trustworthy AI and the intersection between machine reasoning and machine learning. Director of the Wallenberg AI and Transformative Technologies Education Development Program (WASP-ED), Director of the Graduate School of the Wallenberg AI, Autonomous Systems and Software Program (WASP), Coordinator of

the TAILOR ICT-48 network developing the scientific foundations of Trustworthy AI, and President of the Swedish AI Society. Fellow of the Royal Swedish Academy of Engineering Sciences (IVA).

### Martin Krzywdzinski

is professor of international labor relations at the Helmut Schmidt University Hamburg, director at the Weizenbaum Institute for the Networked Society and head of the research group “Globalization, Work and Production” at the WZB Berlin Social Science Center. His research focuses on technological change in the workplace and its impact on work including topics like automation, digitalization, and the development of new organizational models in the platform economy. He has been engaged in a number of initiatives and advisory functions including recently the Research Advisory Board of the “Work of the Future” program of the MIT, the “Future of Work” advisory board of the IG Metall, and the program committee of the DFG Priority Program “Digitalization of Working Worlds”.

### Rose Luckin

is Professor of Learner Centred Design at the UCL Knowledge Lab in London. Her research involves the design and evaluation of educational technology using theories from the learning sciences and techniques from Artificial Intelligence (AI). Rose is also Director of EDUCATE, a London hub for Educational Technology StartUps, researchers and educators. Rose was named on the Seldon List 2017 as one of the 20 most influential people in Education. She is a UFI charity trustee, a governor and trustee of St Paul's school in London and a governor of the Self-Managed Learning College in Brighton. She has taught in the state secondary, Further Education and Higher Education sectors, and she was previously Pro-Vice Chancellor for Teaching and Learning at the University of Sussex.

### Uli Meyer

is head of the Department of Sociology with a focus on Innovation and Digitalization (SID) at Johannes Kepler Universität

Linz. He was a research assistant at the Berlin Social Science Research Center (WZB) as well as the Department for Sociology at TU Berlin. After visiting fellows at Stanford University, USA, as well as the University of Bologna, Italy, he has been a research group leader, head of the Post-Doc Lab Reorganizing Industries at the Technical University of Munich and acting professor for the sociology of digital work at Ruhr Universität Bochum. His research addresses the interplay between society and technology. Current research topics are the future of work, narratives of socio-technical futures, and the use of Artificial Intelligence.

### Gregor Noll

is the Torsten Söderberg Research Professor and a Professor of international law at the Department of Law, School of Business, Economics and Law, Gothenburg University. His research covers migration law, the law of armed conflict, the impact of artificial intelligence on law, and the theory of international law. In 2014, he published the first full-length article in an A-ranked journal exploring the impact of brain-machine interfaces in weapons systems on the implementation of the laws of war. He co-edited and co-authored *War and Algorithm* (open access with Rowman & Littlefield 2019), an interdisciplinary edited volume bringing together perspectives of critical theory, philosophy, legal studies and visual studies.

### Bolanle Ojokoh

is a Professor and head of the department of Information Systems of the Federal University of Technology, Akure, Nigeria. She has twenty years of University teaching experience and has headed a team of researchers over the years in Artificial Intelligence, with particular interest in Information Filtering and Extraction, Recommender Systems, and Gender issues. She is a member of OWSD, ACM, and a Co-Chair of the TWAS Young Affiliates Network (TYAN). She has keen interest in advancing science and sustainability in the developing world, especially with AI, hence collaborated on projects, co-organized and spoken in many events within Nigeria, and across Africa, Europe and other continents. She has produced up to



25 Masters and 9 Ph.D students, and has over 100 publications.

### Adekemi Omotubora

is a senior lecturer at the department of Commercial and Industrial Law, University of Lagos. She holds a PhD from the University of Leeds, UK, and Master of Law from the same University. Her core research and writing focus on the intersections of law, technology, and development particularly privacy and data protection, regulation of emerging technologies and the gender aspects of digital technologies. Kemi is Nobert Elias research fellow at the ZiF Centre of Interdisciplinary Research, University of Bielefeld, Germany, working on the Economic and Legal Challenges in the Advent of Smart Products. She is the co-founder and coordinator of the Community Initiative for Digital Inclusion (CoIfDI), an NGO based in Nigeria.

### Bouchra Rahmouni

is senior Professor at Africa Business School of UM6P and the Head of Social Innovation Lab of Mohammed VI Polytechnic University (UM6P). For 25 years, she has been combining research, pedagogy, and consulting to promote women economic empowerment and social entrepreneurship in Africa. Bouchra Rahmouni has been involved in many steering committees, and Advisory Councils of initiatives launched by e.g. the African Bank for Development, the United Nations Population Fund, or the United Nations, International Peace Institute especially in two main themes: Strengthening Capacity Development Effectiveness for Inclusive Growth and Sustainable Development in Africa and Economic & social evolution of Mediterranean area.

### Deepak Kumar Saxena

is currently an Assistant Professor at Indian Institute of Technology Jodhpur. After obtaining his PhD, he worked with Trinity College Dublin, Dublin Institute of Technology, and Birla Institute of Technology & Science Pilani. Prior to his PhD, he worked with the Indian Space Research Centre, Council for Scientific and Industrial Research, and Defence Research and Development Organisation. His recent areas of interest include Enterprise Systems, Digital Transformation, and AI Ethics. He is currently serving as an Associate Editor for Electronic Journal of Business Research Methods. His edited book 'IoT and Cloud Computing for Societal Good' has been recently published as part of the EAI/Springer Innovations in Communication and Computing book series (EAISICC).

### Burkhard Schafer

is Co-founder of the SCRIPT centre for IT and IP law at the University of Edinburgh. After studying Theory of Science, Logic, Theoretical Linguistics, Philosophy and Law at the Universities of Mainz, Munich, Florence and Lancaster, he joined the School of Law of the University of Edinburgh. His main field of research is the interface between computer technology, science and the law, in particular questions of formalization of legal reasoning, law compliance by design and legal expert systems. As chair of the "Legal services" expert group of AI4People, he was responsible for drafting the data ethics principles for Legal technology. He currently serves in the Data Ethics Group of the Digital Catapult, and the advisory committees of the Scottish Government on "Ethical Digital Scotland" and "New Technologies in Policing".

### Roberto Simanowski

is a researcher in cultural and media science. After his professorships at Brown University (Providence, USA), the University of Basel and the City University of Hong Kong, he lives as a freelance author in Berlin and Rio der Janeiro. His main interests are in digitalisation and digital media. Latest book publications: Data Love (2014 Matthes & Seitz, 2016 Columbia University Press), Facebook Society (2016 Matthes & Seitz, 2018 Columbia University Press), Waste. The Alternative ABC

of New Media (2017 Matthes & Seitz, 2018 MIT Press), Death Algorithm and Other Digital Dilemmas (2018 MIT Press), and Death Algorithm. The Dilemma of Artificial Intelligence (2020 Passages Vienna; 2020 Tractatus Prize) and Digital Revolution and Education. For a sustainable media literacy (2021 Beltz-Verlag).

### Marija Slavkovic

is a Professor in Information Science at the University of Bergen, where she chairs the Information Science and Media Studies Institute. She obtained her PhD in informatics at the University of Luxembourg in 2012 and has also worked at Austria, Italy and the UK. She researches and teaches topics in AI Ethics. Her publications are on the topics of machine ethics, collective reasoning and decision making, and automation. Marija is a board member of the EurAI society and associate editor with the AI Magazine.

### Sigrid Sterckx

is Full Professor of Ethics and Political and Social Philosophy at the Department of Philosophy and Moral Sciences of Ghent University. She is a founding member of the Bioethics Institute Ghent. She lectures courses in theoretical and applied ethics as well as social and political philosophy. Her current research projects focus on: Big Data, AI and medicine; medical end-of-life practices; second and third trimester abortions; and the use of patents as a tool to regulate the technology of genome editing. Sigrid has published widely on these issues, including the co-edited volume *Personalised Medicine, Individual Choice and the Common Good* (Cambridge University Press, 2018). She is a member of the Belgian Royal Academy of Medicine.

### Neil Thurman

is a Professor of Communication in the Department of Media and Communication at LMU Munich. Since 2015 he has held a Freigeist Fellowship from the Volkswagen Foundation for a project on 'Algorithmic News'. He also leads a Volkswagen Foundation "AI and Society" project on AI in Local Journalism. Professor Thurman is an Honorary Senior Research Fellow at

City, University of London. He has published widely in the fields of journalism studies and audience research. Professor Thurman co-chairs The Worlds of Journalism Study Association, the international organisation that sustains the World of Journalism Study, an international comparative survey of journalists in over 100 countries worldwide.

### Ricardo Vinuesa

is an Associate Professor at the Department of Engineering Mechanics, at KTH Royal Institute of Technology in Stockholm. He is also a Researcher at the KTH Climate Action Centre and Vice Director of the KTH Digitalization Platform. He studied Mechanical Engineering at the Polytechnic University of Valencia (Spain), and he received his PhD in Mechanical and Aerospace Engineering from the Illinois Institute of Technology in Chicago. His research combines numerical simulations and data-driven methods to understand and model complex wall-bounded turbulent flows, such as the boundary layers developing around wings and urban environments. Dr. Vinuesa has received, among others, an ERC Consolidator Grant and the Göran Gustafsson Award for Young Researchers.

# INFORMATION

POSTER AND SPEAKER ABSTRACTS CAN BE  
DOWNLOADED HERE:



## CONFERENCE VENUE



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Tram lines 4 (Garbsen) and 5 (Stöcken)  
stop: 'Herrenhäuser Gärten'

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