FUTURAS IN RES
**WHAT'S
THE IQ OF AI?**
NOV. 21/22, 2019
BERLIN

**70 YEARS
OF FUTURE**
#WHATSNEXT

**WHAT'S THE DIFFERENCE
BETWEEN NATURAL AND
ARTIFICIAL INTELLIGENCE?**

**WHAT'S ALREADY ON THE ROAD
AND WHAT'S STILL FAR OFF?**

Artificial Intelligence (AI) is making rapid progress and will profoundly impact our future. That´s why this year´s motto of our annual international science and technology conference FUTURAS IN RES is "What's the IQ of AI?"

I like to cordially invite you to this event, where international experts from research, business and society will present and discuss the latest developments, future potentials and challenges of AI from various perspectives. Along five different dimensions of intelligence we will explore to which extent AI possesses abilities for communication, perception, reasoning, consciousness-building and empathy and what the future might hold for us. Our panel discussions will also address important social, legal and ethical questions raised through progress in AI.

FUTURAS IN RES is hosted by the Fraunhofer-Gesellschaft, Europe's largest organization for applied research, and combines scientific excellence with a global perspective and a profound focus on sustainable value creation.

Sincerely yours,

Prof. Dr. Reimund Neugebauer
President of the Fraunhofer-Gesellschaft

FUTURAS IN RES 2019
WHAT'S THE IQ OF AI?

KEYNOTES & PRESENTATIONS
PANEL DISCUSSIONS
INTERACTIVE SCIENCE-EXPO

Thursday, November 21, 2019

9:00 a.m.	*Registration and welcome coffee*
9:30 a.m.	**Welcome, introduction and moderation:**
	Prof. R. Klingner, Director Research of Fraunhofer-Gesellschaft
	Keynotes:
	Prof. R. Neugebauer, President of the Fraunhofer-Gesellschaft
	Frank Wetzel, Head of Unit Innovation, Industry, Energy and Transport at the German Federal Chancellery
	Prof. S. Wrobel, Executive Director of Fraunhofer Institute for Intelligent Analysis and Information Systems
10:30 a.m.	**Session 1 – Reasoning**
	Chair: Prof. T. Wiegand, Executive Director of Fraunhofer Heinrich Hertz Institute
12:45 p.m.	*Lunch*
1:45 p.m.	**Session 2 – Communication**
	Chair: Prof. C. Bauckhage, Scientific Director of Fraunhofer Center for Machine Learning
4:00 p.m.	*Coffee break*
4:30 p.m.	**Session 3 – Perception**
	Chair: Prof. J. Beyerer, Executive Director Fraunhofer Institute of Optronics, System Technologies and Image Exploitation
6:45 p.m.	**Night of AI**
	Interactive Science-Expo with Fraunhofer R&D

Friday, November 22, 2019

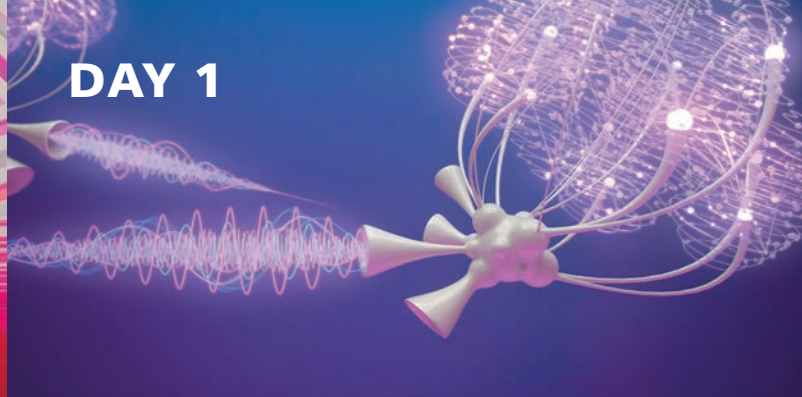|	
8:30 a.m.	*Registration and welcome coffee*
9:00 a.m.	**Welcome, introduction and moderation:**
	Prof. R. Klingner, Director Research of Fraunhofer-Gesellschaft
	Keynotes:
	Dr. Juha Heikkilä, Head of the Robotics and AI unit in the EC Directorate-General for Communications Networks, Content and Technology
	Prof. W. Bauer, Chairman of the Fraunhofer Group for Innovation Research
10:00 a.m.	**Session 4 – Consciousness**
	Chair: Prof. H. Lakner, Executive Director of Fraunhofer Institute for Photonic Microsystems
12:15 p.m.	*Lunch*
1:15 p.m.	**Session 5 – Empathy**
	Chair: Prof. A. Heuberger, Executive Director of Fraunhofer Institute for Integrated Circuits
3:30 p.m.	**Summary & Wrap-up: Prof. R. Klingner**
4:00 p.m.	*End of conference*

Moderator:

Prof. R. Klingner,
Director Research of Fraunhofer-Gesellschaft

Session 1 – Reasoning & Learning Ability
How can AI arrive at conclusions in a reasonable, trustful and understandable way? What are the advantages and pitfalls of Deep Learning and classical computer logic?

Session 2 – Communication & Natural Language Processing
How good is AI in understanding human forms of communication? Is natural language processing capable of really understanding the context, or is it enough to just give you a plausible answer?

Presentation & Panel Discussion

Prof. Susanne Biundo-Stephan
Director of the Institute of Artificial Intelligence
Ulm University

Douglas B. Lenat, PhD
CEO of Cycorp, Inc. and founder of Cyc knowledge representation and reasoning platform, USA

Prof. Sami Haddadin
Chair of Robotics Science and System Intelligence
Technical University Munich

Dr. Heike Riel
IBM Fellow, Director IoT Technology and Solutions IBM Research, Switzerland

Dr. Wojciech Samek
Head of Machine Learning Group at Fraunhofer
Heinrich Hertz Institute

Presentation & Panel Discussion

Dr. Ivana Kruijff-Korbayová
Senior Researcher at German Research Center for AI (DFKI), Multilinguality and Language Technology

Jeremie Lecomte
Senior Technical Program Manager for
Alexa AI at Amazon, USA

Steve Worswick
Senior Artificial Intelligence Designer at Pandorabots and creator of Mitsuku Chatbot, USA

Kenza Ait Si Abbou Lyadini
Senior Manager Robotics & Artificial intelligence,
Robotics and Artificial intelligence Hub Deutsche Telekom

Prof. Jens Lehmann
Lead Scientist Conversational AI and Knowledge Graphs,
Institute for Intelligent Analysis and Information Systems

DAY 1

DAY 2

Session 3 – Perception & Data Interpretation
How does AI perceive the world and recognize its surroundings? How does sensor technology, big data, expert knowledge and modelling come together to create cognitive systems?

Session 4 – Consciousness & Neuro-inspired Computing
Can AI be aware of itself and its surroundings? Will the difference between brains and computers remain fundamental? What will be the impact of neuro-inspired computing for AI?

Presentation & Panel Discussion

Prof. Tanja Schultz
Director of the Cognitive Systems Lab Faculty of Mathematics / Computer Science at University of Bremen

Dr. Babak Hodjat
VP Evolutionary AI at Cognizant, development of deep learning solutions, USA

Jana Eggers
CEO of Nara Logics, Inc., development of neuroscience-based AI, USA

Chaitanya Dhumasker
CEO and Co-Founder at Monitorfish, development of AI solutions for improving fish farming

Dr. Wolfgang Hübner
Lead Scientist Video Content Analysis, Fraunhofer Institute for Optronics, System Technologies and Image Exploitation

Presentation & Panel Discussion

Prof. Sabina Jeschke
Member of the Management Board for Digitalization and Technology at Deutsche Bahn AG

Dr. Moritz Helmstaedter
Director and Scientific Member at the Max Planck Institute for Brain Research

Dr. Carlo Reita
Director Strategic Partnerships & Planning CEA-Leti, France

Dr. Hiroshi Yamakawa
Director of Dwango Artificial Intelligence Laboratory Dwango Co., Ltd., Japan

Dr. Alpha Tom Kodamullil
Researcher at Fraunhofer Institute for Algorithms and Scientific Computing

Session 5 – Empathy & Human-Machine-Interaction
Will AI be able to understand human needs, intentions and emotions? Why is emotional intelligence so important for human-machine-interaction? How can AI help to find solutions for social good?

Presentation & Panel Discussion

Christian Mio Loclair
Creative Director at Waltz Binaire,
new media artist and computer scientist

Dagmar Schuller
CEO and Co-Founder of audEERING GmbH,
development of AI based emotion analysis

Dr. Christian Karrasch
Scientific expert and technical manager at DLR, project leader for the CIMON AI-assistant for astronauts at ISS

Prof. Padmanabhan Anandan
CEO at Wadhwani AI,
researcher in computer vision and AI, India

Dr. Jens-Uwe Garbas
Lead Scientist Image Analysis and Pattern Recognition
Fraunhofer Institute for Integrated Circuits

Tickets *Pricing (net fare)*

Conference Day 1 and 2 (incl. Night of AI): EUR 690.00
Conference Day 1 (incl. Night of AI): EUR 450.00
Conference Day 2: EUR 300.00

Registration
http://s.fhg.de/whats-the-iq-of-ai

Venue
AXICA Congress and
Convention Center
Pariser Platz 3
10117 Berlin, Germany

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