

News

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1. Kick-off meeting of the first European Network of Artificial Intelligence (AI) Excellence Centres
<https://ec.europa.eu/digital-single-market/en/news/towards-vibrant-european-network-ai-excellence>

The first European Network of Artificial Intelligence (AI) Excellence Centres held a kick-off meeting at begin of October consisting of five projects which have been selected following a call launched in July 2019 to establish a common approach, vision and identity for the European AI ecosystem.

The project AI4Media focuses on advancing AI to serve media to yield trustworthy AI as a beneficial technology in the service of society and media based on European values and ethics. The project ELISE focuses on different kinds of reasoning and types of data applicable for almost all sectors of science and industry, while being aware of data safety and security, and striving for explainable and trustworthy outcomes. The HumanE-AI-Net project targets to support technologies for human-level interaction, by providing new abilities to perceive and understand complex phenomena, to individually and collectively solve problems, and to empower individuals with new abilities for creativity and experience. The TAILOR project has set its goal towards building an academic-public-industrial research network to provide the scientific basis for Trustworthy AI, combining learning, optimization and reasoning to produce AI systems that incorporate safeguards for safety, transparency and respect for human agency and expectations. Finally, the coordination and support action VISION fosters exchange between the selected projects and other relevant initiatives to overcome fragmentation in the European AI community.

2. Official launch of ELLIS Units
<https://ellis.eu/news/official-launch-of-ellis-units-15th-of-september-2020>

The European Laboratory for Learning and Intelligent Systems (ELLIS) has officially launched its 30 ELLIS research units on Tuesday, September 15. Since the first 17 units were announced in December 2019, the ELLIS

initiative has added another 13 units at research institutions across Europe. While an in-person launch was initially planned in spring at the Royal Society in London, the event was postponed as a result of the global COVID-19 pandemic and has now taken place online with the opportunity to join via livestreaming.

3. EU member meeting for start of Horizon Europe Programme 2021
<https://www.bmbf.de/de/karliczek-eu-mitgliedsstaaten-erzielen-einigung-zu-horizont-europa---wichtiger-12628.html>

The EU member states had a meeting in the beginning of October for the upcoming Horizon Europe Programme (2021–2027). Remaining issues to be negotiated concern synergies with other EU programmes, budgeting through the rebuilding measure “Next Generation EU”, the fragmentation of the Horizon Europe Budget in the individual program areas and international collaboration as well as the association of third countries. The goal is to pass the Programme till the end of this year.

In contrast to the predecessor programme “Horizon 2020” the European Innovation Council (EIC) will now be institutionalised with the goal to support market building innovations. Also, with “Horizon Europe” a “Strategic Planning Process” and “Missions” are being introduced. The Strategic Planning Process will determine the most important political and strategic priorities till 2024 with a special focus on ecological and digital transformations as well as the sustainable development goals of the United Nations. Currently five Mission areas have been defined concerning strategies for climate change, cancer, healthy oceans, climate neutral intelligent cities and healthy soil and food. Notably, no missions explicitly targeting digital challenges have been named so far.

4. German Government’s AI programme halting: almost none of the 100 announced AI professorships appointed
<https://www.handelsblatt.com/politik/deutschland/kuens-tliche-intelligenz-bund-hat-bisher-kaum-neue-ki-professuren-eingerichtet/26287136.html?ticket=ST-325061-SEMfkLcPIDcTkbqJbwn3-ap1>

A query of the Green Party in the German Bundestag regarding the status of the 100 announced new AI professorships reveals a faltering implementation of the AI strategy. According to the Handelsblatt the ministry listed 28 newly created AI professorships in an answer to the query. However, 2 of these are funded by Northrhine-Westphalian bodies and—significantly—according to Anna Christmann, speaker for innovation and technology of the Green party, most of the listed professorships were funded by other programmes. A new programme that was created within the scope of the AI initiative was the AI-professorship programme of the Humboldt Foundation which achieved so far 2 new AI-professorships. Many of the listed professorships belonged to the Heisenberg-Programme of the DFG which does not belong to the AI programme of the German government.

This observation is in line with the fact that the BMBF has so far published no strategy how the announced 3 + 2 billion € for AI till 2025 will be invested. Similarly, from the 60 billion € that were announced as part of the Measures for the Future of the Innovation Country Germany for education, research and innovation, measures for only about 20 billion € have so far been announced by the BMBF.

While this may be a consequence of the Corona Pandemie which allocates also political resources and hinders translation processes of political decisions it should raise public attention. Already the Corona Crisis has obscured the public awareness and discussion of the fact that the public share of funding of research and innovation in Germany [1] has been in the decline almost continuously over the last decades and that the EU in its historical EU-Deal in July 2020 has effectively shortened the budget for Horizon Europe, the European research and innovation programme, to 81 billion € for 2021–2027, including the resources for fighting Corona. In 2018 the EU had suggested a budget of 94 billion €—which means that the research and innovation budget of the EU has effectively been shortened by about 14% since the plans from 2018.

[1] <https://www.datenportal.bmbf.de/portal/en/Table-1.3.1.html>

5. German Ministry for Education and Research (BMBF) initiates action plan for Research Data
<https://www.bmbf.de/de/aktionsplan-forschungsdaten-12553.html>

The BMBF brings its action plan for research data into the digital Cabinet of the German government. The goal is to make research data accessible for the state, economy, research and society. Therefore, all measures and initiatives of the BMBF to this end will be bundled under the action plan Research Data.

1 Calls

1.1 KI2021—44th German Conference on Artificial Intelligence in Berlin (September 27—October 1st, 2021)

<https://ki2021.uni-luebeck.de/index.html>

KI2021 is the 44th German Conference on Artificial Intelligence organized in cooperation with the Fachbereich Künstliche Intelligenz der Gesellschaft für Informatik (GI-SIG AI). The German AI Conference basically started 45 years ago with the first GI-SIG AI meeting on Oct. 7, 1975. KI is one of the major European AI conferences and traditionally brings together academic and industrial researchers from all areas of AI, providing an ideal place for exchanging news and research results on theory and applications. KI2021 will be organized in combination with INFORMATIK2021. The technical program of KI2021 comprises paper presentations as well as tutorials and workshops.

We invite papers, which have to be in English and formatted according to the Springer LNCS style, in the following three categories: (1) Full technical papers (12 pages max., excluding references) are expected to report on new research that makes a substantial technical contribution to the field. Additional details may be included in an appendix, which, however, will be read at the discretion of the PC. (2) Technical communications (6 pages max., excluding references) can report on research in progress or other issues of interest to the AI community. Examples of work suitable for technical communication paper submissions include: novel ideas whose scope is not large enough for a full paper; important implementation techniques; novel interesting benchmark problems; short experimental studies; interesting applications that are not yet completely solved or analyzed; position or challenge papers. Technical communication submissions are especially invited for software demonstration or PhD work in progress. (3) Abstracts of papers (3 pages max., excluding references) accepted at (most recent editions of) major AI conferences are welcome to bring together German members of the international AI community. Abstracts of accepted papers will be evaluated based on the ranking of the venue it has been accepted for. We especially invite abstract of papers from A or A* ranked AI conferences.

Full papers and technical communications will be subject to blind peer review based on the standard criteria of relevance, significance of results, originality of ideas, soundness, and quality of the presentation. Papers accepted in this process will be published in the main conference proceedings, published by Springer in the

LNAI series and will be presented at the conference. At least one author of each accepted paper must register for the conference and present the contribution. The 3 page paper abstracts will be bundled and included in a preface or appendix section of the conference proceedings.

1.1.1 Important Dates

March 1, 2021: Workshop/Tutorial submission.
 May 10, 2021: Abstract submission.
 May 17, 2021: Paper submission.
 Jun 28, 2021: Notifications.
 Jul 12, 2021: Final versions.

1.1.2 List of Topics

KI2021 will have a special focus on human-centered AI with special highlights on AI and Education and explainable machine learning.

Besides this special focus, KI2021 invites original research and application papers on all aspects of AI research, including but not limited to the following:

- Agent-based and multi-agent systems.
- AI applications and innovations.
- Argumentation in AI.
- Belief change.
- Cognitive modelling.
- AI and digital humanities.
- AI and psychology.
- Commonsense reasoning.
- Computer vision.
- Constraint satisfaction, search, and optimization.
- Diagnosis and configuration.
- Evolutionary computation.
- Game playing and interactive entertainment.
- Information retrieval, integration, and extraction.
- Interactive and automated theorem proving.
- Knowledge engineering and ontologies.
- Knowledge representation and reasoning.
- Knowledge discovery and data mining.
- Machine learning.
- Multidisciplinary AI.
- Natural language processing.
- Nonmonotonic reasoning and default logics.
- Philosophical foundations of AI.
- Planning and scheduling.
- Recommender systems.
- Responsible AI, normative reasoning.
- Robotics.
- Uncertainty in AI.
- Web and information systems.

2 Conference Reports

1. KI2020—43rd German Conference on Artificial Intelligence
 Bamberg Germany: September 21–25, 2020.
 Tobias Huber, Katharina Weitz.

On the 21st September 2020, in the charming little town of Bamberg, the annual German Conference on Artificial Intelligence (KI) started. This marks the first time that the KI conference took place in Bavaria. But that was not the only premiere, the format of the conference was also new: It took place completely online. The reason for this was the Corona Pandemic. "We monitored the actions of other AI conferences. In May, we were still considering organizing the KI2020 as a hybrid event, but in July it was clear to us that we would do it online," says Prof. Dr Ute Schmid, who was responsible for the organization of the KI2020 this year together with Prof. Dr Diedrich Wolter and Prof. Dr Franziska Klügl. 204 participants from more than 10 countries attended the online conference. A great feature of the online conference was that GI members could attend for free, which encouraged many young researchers to apply for GI membership.

But how to design a conference online and at the same time give attendees the opportunity to exchange ideas? The organisers took the opportunity to mix new ideas with well-established formats. The classic keynote talks were held in realtime over ZOOM by six outstanding researchers from academia and industry: Anthony G. Cohn ("Learning about Language and Action for Robots"), Hector Geffner ("From Model-free to Model-based AI: Representation learning for Planning"), Jana Koehler ("10¹²⁰ and Beyond: Scalable AI Search Algorithms as a Foundation for Powerful Industrial Optimization"), Nada Lavrač ("Semantic Relational Learning"), Sebastian Riedel ("Open and Closed Book Machine Learning") as well as Ulli Waltinger ("The Beauty of Imperfection: From Gut Feeling to Transfer Learning to Self-Supervision"). The format of the presentation sessions was new: videos of the talks were uploaded in advance. The time slots of the speakers were then solely used for discussions. As virtual coffee breaks, the organisers provided several ZOOM lobbies which the participants could use for socialising and networking between the sessions. The KI also offered online workshops, tutorials, exhibitions, demos, a students day, and a doctoral consortium via ZOOM.

But which of the COVID-19 related modifications worked and which were less successful? The coffee break lobbies between sessions were met with mixed receptions: On the one hand, the keynote speakers often

stayed in the main lobby after their talks. This was a perfect opportunity for younger and less experienced researchers to ask questions without the fear of embarrassing themselves in front of the bigger keynote audience. This allowed me to have a very insightful short conversation with one of the keynote speakers. Something which I would probably not have dared in a traditional setting if only because of the physical constraint of having to approach a famous researcher (who is probably surrounded by other well-known researchers). On the other hand, the lobbies were not really frequented between the normal sessions. Other events that live from personal interaction and did not translate well to an online format were the exhibitions, demos, the doctoral consortium, and the students day. The keynotes, talks, workshops, and tutorials were attended as much as ever. Something I personally really liked was the separation of talks and questions. Being able to watch the talks in advance allowed the participants to really think about the prospects of the talk and formulate interesting questions. All sessions I attended were having lively and thorough discussions during the full 20 min given to each speaker. This would not have been possible in a traditional conference setting.

One of the most obvious advantages of traditional conferences is getting to experience new cultures and locations. While travelling is not possible during the Corona Pandemic, the organisers did everything they could to bring Bamberg into our own living rooms. Between sessions, they showed short informational clips about the city with interesting information and trivia. I now know why Bamberg's old town hall had to be built on poles above the river and that Bamberg's Old Court was a filming location for the 2011 movie "The Three Musketeers". Replacing the socialising event, the organisers invited the participants to an online beer tasting in which we all got to sample some of Bamberg's finest beers from the comfort of our own homes. This was accompanied by interesting facts about Bambe(e)rg's (pun intended) beer history including interesting trivia like the fact that Bamberg had a different purity law then the rest of Bavaria or that the people of Bamberg once drank 17 Million litres of beer to finance a bridge. The short videos and the beer tasting did not interfere with the rest of the conference but gave me the feeling of having experienced some of Bamberg's Culture and made me curious to travel there in person someday.

But besides the COVID-19 modifications, what were the main topics and trends of the KI 2020? As every host university for the KI conference, Bamberg emphasized

its main research topics: AI and education and AI for Digital Humanities. The first topic has been covered by a panel discussion, the second by a workshop. Additionally, we felt that the topics explainable AI and hybrid AI systems received particular attention throughout the conference.

The transfer of AI knowledge, as well as the training of AI-related skills as an educational task, is in our opinion an important future-oriented direction of AI. Therefore we think it is great that the KI2020 addressed this topic in the panel "Explaining, teaching, and discussing AI". Here, politicians and researchers had a lively discussion on (X)AI in teaching and education.

The University of Bamberg has been demonstrating for years how research in the humanities and computer science can be successfully combined. It was therefore not surprising that this topic was also taken up in the workshop on "AI methods for digital heritage" led by Christoph Schlieder and Günther Görz. Frankly, it is a little upsetting that the conference was online. With Bamberg as a World Heritage city, this workshop could hardly have found a more suitable venue.

The focus on explainable AI can, for example, be seen in the fact that the International Workshop on Explainable and Interpretable Machine Learning (XI-ML) was the most attended workshop and held over 80 participants. In a very timely invited talk, Marcin Joachimiak, who works on the Environmental Genomics and Systems Biology Division at Lawrence Berkeley National Laboratory (LBNL), talked about his work on creating knowledge graphs for COVID-19 research. The discussions after the last talk of the workshop went on far beyond the expected end and lasted until after 7:30 pm.

The last thematic trend we noticed, which is also related to transparency, was a focus on hybrid AI systems consisting of a combination of machine learning models and symbolic AI methods. Related to this we especially enjoyed the keynote by Prof. Geffner in which he compared symbolic solvers with learners like Deep Reinforcement Learning. He demonstrated the advantages of each of those approaches and how they can complement each other, likening them to analytical and intuitive minds respectively.

Interested in the KI? Then you will have the chance to participate next year. The 44th German Conference on Artificial Intelligence will take place from 27.09. to 01.10.2021 in Berlin. The organisers are Prof. Dr Stefan Edelkamp, Prof. Dr Ralf Möller, and Prof. Dr Elmar Rückert.