

Researchers looking into AI



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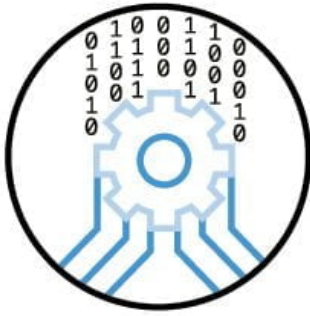
Artificial intelligence is having a growing impact on our daily lives, and is also revolutionising research. The ETH AI Center currently comprises around 102 professors from all 16 departments of the university, with research also being conducted by 17 doctoral students and 8 postdoctoral researchers. This is part of a fellowship programme funded by private individuals on a philanthropic basis and the Heidi Ras Stiftung.

A selection of the research personalities and their questions:

Andreas Krause

How can machines be trained to learn and support humans?

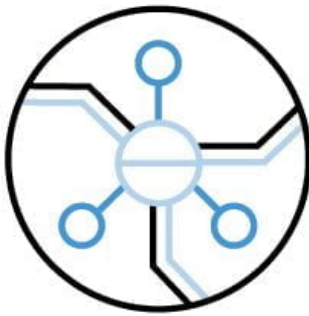
Krause is one of Europe's leading researchers in the field of machine learning. His approach combines mathematical elegance with a sense of social responsibility.



Gisbert Schneider

How can new medicines be designed on a computer?

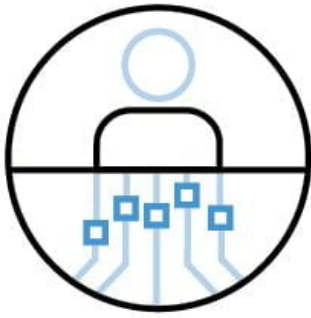
Schneider uses AI models that independently design molecular structures with one or more desired property.



Julia Vogt

How can computer science and medicine be combined so that patients benefit from personalised treatments?

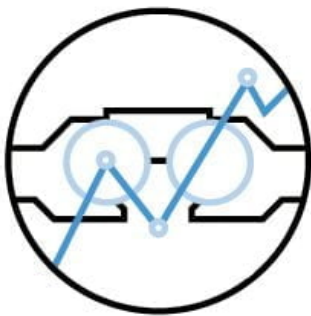
With her interest in precision medicine, Vogt is focusing on one of the megatrends of modern medicine.



Daniela Domeisen

How can extreme events such as heat waves be successfully predicted weeks to months in advance?

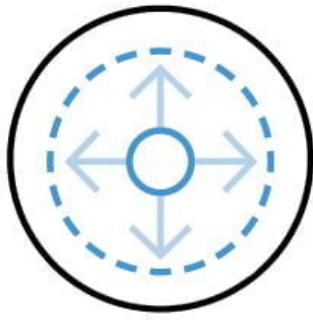
Domeisen uses statistical tools and data science to enable people to better prepare.



Jelena Trisovic

How can the scope of autonomous systems, e.g. construction robots, be expanded?

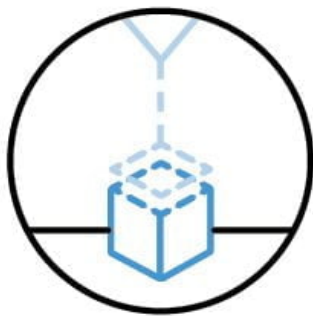
The former Excellence Scholar is researching the connection between computer vision and system control in her doctorate.



Benjamin Dillenburger

How can the potential of additive manufacturing be used in building construction?

Dillenburger focuses on the development of building technologies based on the interaction of computer-aided design methods, digital manufacturing and new materials.



Jakub Macina

How can research in the fields of artificial intelligence and learning sciences be brought together?

Doctoral student Macina's vision is to make education more personalised and more widely accessible.



More about the ETH AI Center

3 questions for Alessandro Curioni

Head of IBM Research Zürich

Like ETH, IBM is involved in AI research on a broad scale. How do the activities of large tech companies and university research benefit each other in Zurich?

Many key research questions in AI have both a foundational and impact dimension, for example establishing trust in AI algorithms. It is very important that we actively seek out and leverage synergies across academia and industry.

How do you view the international significance of the ETH AI Center?

The ETH AI Center is a wonderful initiative that brings together leading ETH professorships and their research areas to address impact areas of the utmost importance to Switzerland and the world. This type of institution is a great vehicle for exposing cutting-edge research to a wider audience and offering a platform for collaboration.

Like the leading minds at ETH, you also emphasise the importance of creating a more trustworthy AI - what are the criteria that AI needs to meet in this regard?

For AI to be trusted, we have to focus on the four pillars of fairness, transparency, explainability and privacy. As AI researchers we need to demonstrate that AI can be made free of bias, and explain how it makes decisions, is robust against adversarial attacks and does not reveal data that should be protected.



https://ethz-foundation.ch/en/spotlight/uplift_9_ai_center/

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