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### **Messages from the AI engine room**

## **The Plurality of Artificial Intelligence**

*Artificial intelligence covers a variety of research topics. This diversity is its strength, but we need to talk!*

From the humanities to medicine and physics to new technologies, the sciences have always been great drivers of transformation and radical changes. Artificial intelligence, or AI for short, is no exception.

But what is AI? Is a self-driving train, a washing machine with a dirt level sensor, or an "intelligent" dating service already manifestations of AI? A self-driving train certainly is.

Politicians and the public seem to be somewhat wondering around in the dark, and instead of confidence and enthusiasm, there is rather a certain unease about AI: Some fear that machines could take away jobs from humans, others worry about deepfakes that distort media content so deceptively that they can manipulate consumers, and still others are even afraid of an apocalyptic singularity, that uncontrollable superintelligence that dominates the world and subjugates mankind.

None of these, of course, are the goals of AI research. And they never were. Yes, a computer passes the Turing test and is considered intelligent if it can imitate a human in an open text conversation so successfully that you no longer know whether you are talking to a machine or a human.

But it's not about competition. Quite the opposite. Shared skills, mistakes and language connect humans and machines. They make it much easier to form friendships. For me, a Turing test is only passed when we accept a computer as one of "us." And where there is an "us", there is also a "helping each other".

Responsible AI researchers know that computers are most useful to society and the economy when they complement and augment human capabilities. When they help us.

Just recently, researchers at DeepMind (Google's London-based AI sister company) provided evidence that AI systems can provide crucial clues for mathematical research: in cooperation with a mathematician, the AI was able to derive a new approach to prove correctness of a 40-year-old mathematical conjecture.

And the Norwegian world chess champion Magnus Carlsen found a surprising move at this year's World Chess Championship with the help of AI: at the beginning everything looked like the classical Spanish Opening, but on move eight Carlsen suddenly sacrificed a pawn! Not an unknown sacrifice in the league of the world's strongest AI chess systems, however,

observers and commentators like grandmaster and world number six Anish Giri were surprised.

Human creativity and cooperation, participation as well as their machine extensions have a long tradition in AI research. It is by no means the case that AI would lead to greater uniformity and conformity or even to the end of mankind. On the contrary, it complements us in many ways. It is as colorful as our society!

Germany is very successful at international AI journals and conferences. We are blessed with several excellent AI scientists. But their voices are often missing from the public discourse. What one hears and reads is often one-sided, dominated by current trends or characterized by prejudices and reservations about AI.

We — the AI Club — want to change that: <https://www.ki-klub.de>. We are a network of AI experts with internationally recognized scientific expertise. Our club does not propagate any particular opinion about AI but represents the diversity of opinions that leading scientists in the field have. We want to make it possible for the media, the public and politicians to form their own opinion, in which they receive reliable information from one source but from many minds. We connect AI experts, educate about the different currents in AI, and provide insights into the deeper insights of the field regarding thinking, learning, and types of intelligence - in animals and machines alike. We offer perspectives and refer to the serious and well-founded experts in the various sub-disciplines of AI.

In the spirit of Audrey Tang, Digital Minister of Taiwan: When we hear "the singularity is near", we should remember: the plurality is here!

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