Friday 5 May 2017 at 14:15
Tea & Cookies starting at 13:00

BMS Loft, Urania, An der Urania 17, 10787 Berlin

CH$_4$

C$_4$N$_2$H$_4$

C$_6$H$_6$

C$_3$H$_8$

C$_6$O$_3$H$_6$

C$_6$H$_5$CH$_3$

source: http://www.nature.com/ncomms/about/open-access
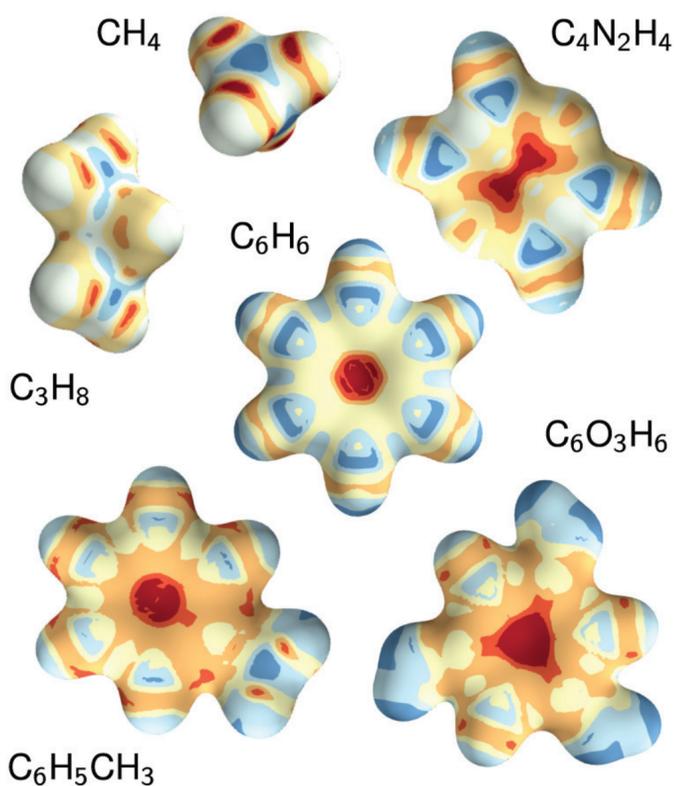
Klaus-Robert Müller
(TU Berlin / U Korea, Seoul / MPII)

Machine learning and AI for the sciences — towards understanding

In recent years, machine learning (ML) and artificial intelligence (AI) methods have begun to play a more and more enabling role in the sciences and in industry. In particular, the advent of large and/or complex data corpora has given rise to new technological challenges and possibilities.

In his talk, Müller will touch upon the topic of ML applications in the sciences, in particular in neuroscience, medicine and physics. He will also discuss possibilities for extracting information from machine learning models to further our understanding by explaining non-linear ML models. Finally, Müller will briefly outline perspectives and limitations.

Klaus-Robert Müller is a physicist and computer scientist, and chair of the Machine Learning group at TU Berlin. He got his PhD in theoretical computer science in 1992 from U Karlsruhe, Germany. In 1999 he was awarded the Olympus Prize for pattern recognition, in 2006 he received the SEL Alcatel Communication Award, and in 2014 he was granted the Berlin Science Prize. Müller is a member of the German National Academy of Sciences Leopoldina, he holds a distinguished professorship at Korea University in Seoul, and he was recently appointed external scientific member of the Max Planck Institute for Informatics in Saarbrücken. His research areas include statistical learning theory for neural networks, support vector machines and ensemble learning techniques.

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