



Cogisen to Present at TQC 2018 First International Quantum Software and Quantum Machine Learning Workshop

Syed Adil Rab to present how the synergy between quantum mechanics and a new cognitive model can enhance quantum machine learning

July 3rd, 2018, Rome, Italy – Cogisen, the developer of artificial intelligence (AI) technologies, today confirmed it will be presenting at the 13th Annual Theory of Quantum Computation, Communication and Cryptography (TQC) Conference and at the 1st international Quantum Software and Quantum Machine Learning workshop (QSML). Taking place on July 16 – 20 in Sydney it is organised by The Centre for Quantum Software and Information (QSI) at the University of Technology Sydney and it is one of the world's most prestigious events for leading academics and researchers in Quantum Computing. Syed Adil Rab, who leads Quantum Information development at Cogisen, will be presenting his work on "Quantum Modeling of Sparse Information for Machine Learning," which will propose a different approach for managing the input data for Quantum-inspired machine learning through modelling of sparse data.

Syed Adil Rab will discuss the challenges with classical quantum-inspired machine learning methods, especially when it comes to managing input data in a quantum state. Cogisen has developed a new cognitive modelling platform that can extract high-level information through analysis of sparse data, thus requiring a smaller input set for creating features. Cogisen's algorithm extrapolates each relevant block of information as a single feature in the form of a complex vector and is adaptable to different signals in the frequency domain such as audio and video. This leads to the construction of tensor networks of smaller and manageable size, which take the relevant information from a larger data set and produce a discrete set of feature vectors to create a vector space of the size of tens of elements instead of thousands. Consequently, when new information is added to the tensor network, the adaptation process requires less data to describe that object, because it can be identified using a combination of the existing vectors.

"We are hugely excited about the work we are doing in Quantum Information, because it builds on the significant technological advantage our AI algorithms give us," said Christiaan Erik Rijnders, founder and CEO, Cogisen. "If AI is to achieve the next major breakthrough then we have to move beyond the brute force statistical models in use today and Quantum Information will clearly help to speed up the processing of data to achieve faster responses. Combined with the Cogisen AI Platform we believe this will put us at the cutting edge of AI innovation and we delighted to contribute our findings at TQC 2018."

The Quantum Software and Quantum Machine Learning Workshop will bring together leading experts in Artificial Intelligence, Machine Learning and Quantum Computing. Alongside Cogisen other speakers will include academics from CQT Singapore, University of Innsbruck, University of KwaZulu-Natal and the University of Waterloo. Cogisen's presence at this event builds on its participation at the [3rd Annual Cisco and Ecole Polytechnique Innovation and Research Symposium](#) and supports the work of the Cogisen Cognitive Laboratory. It is now exploring Quantum Computing combined with the Cogisen AI Platform to qualify the potential to speed up the efficiency of decision making thanks to the volume of information that can be processed in constant time.

Syed Adil Rab will speak on July 16th at the TQC Conference and July 19th at the QSML workshop. The full agenda can be seen at this link: <https://www.tqc2018.org/accepted-talks>



About Cogisen

Cogisen is made up of a team of world-class experts developing AI cognitive modelling technology to extract meaning, intent and context from video and other inputs. The innovative and patented AI algorithms underpinning the Cogisen Cognitive AI Platform are opening up a wide variety of market opportunities. The company is starting to demonstrate its use in fields such as detecting violence in security camera applications and monitoring communications networks for cybersecurity threats. The company's Cognitive Modelling Lab is also building applications for industries as diverse as mobile and social, autonomous vehicles and the Internet of Things.

For more information, please visit: www.cogisen.com

Contact Information

Jacopo Passacantilli

Cogisen

+39 (335) 687 2903

jacopo@cogisen.com

Cairbre Sugrue

Sugrue Communications for Cogisen

+44 7502 203 769

cairbre@sugrucomms.com