



## Physikalisches Kolloquium Einladung

## Physics Colloquium Invitation

Monday, 04 February 2019, Lecture Hall N24/H13, 16:15  
Coffee and cookies will be served in front of the lecture hall from 16:00

# Using games to study hybrid human-machine learning in quantum physics

### Prof. Jacob Friis Sherson

Director and Founder of the ScienceAtHome project and Center for Hybrid Intelligence

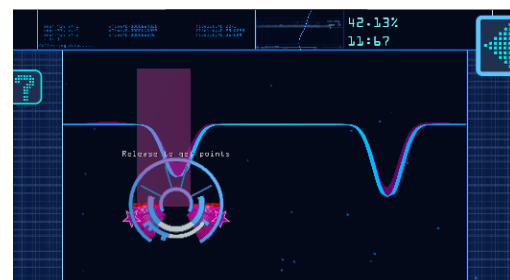
Department of Physics and Astronomy  
Aarhus University



Despite enabling impressive advances, the big-data driven deep learning paradigm has been challenged by AI scholars for not holding the potential to reach human scale intelligence. Instead, they propose studies of the human ability to reach heuristic solutions from little data as a basis for hybrid human-machine intelligence. An open question for the future of research is therefore how to design interfaces that allow for an optimal interaction between human intuition, complex machinery, and increasingly powerful ML.

In the [www.scienceathome.org](http://www.scienceathome.org) project, we have developed gamified interfaces allowing so far 250,000 players to contribute to research by providing insightful seeds for quantum optimization algorithms and remote access to our ultra-cold atoms experiment for amateur scientists, students, and researchers.

Finally, within the [www.quatomic.org](http://www.quatomic.org) project, we create visual software tools to enable intuition-based theoretical quantum research as well as a non-formalistic and powerful introduction to university level quantum education.



Host: Prof. Dr. Wolfgang Schleich, Institute of Quantum Physics

Organisation: Prof. Dr. Fedor Jelezko, Institute of Quantum Optics, [fedor.jelezko@uni-ulm.de](mailto:fedor.jelezko@uni-ulm.de), +49-731-50-23751