International Workshop on Machine Learning and Quantum Computing Applications in Medicine and Physics

WMLQ2022

13 to 16 September 2022, Warsaw Poland

We cordially invite you to the **International Workshop on Machine Learning and Quantum Computing Applications in Medicine and Physics**, which will take place in Warsaw (Poland) from 13 to 16 September 2022. The workshop is organized by the National Centre for Nuclear Research in cooperation with scientists from the University of Vienna, Jagiellonian University and Polish National Competence Centre in HPC (EuroCC).

In the last years, we have seen an increasing number of interdisciplinary exchanges, especially with machine learning methods involved. Many times similar techniques and tools are used to solve a variety of problems. The transfer of methods between disciplines is highly needed and it has repeatedly proved to be a very fruitful approach. This workshop aims to facilitate such transfers of knowledge by bringing together experts from various institutions and research groups in the field of medical imaging, radiotherapy, physics, and computer science. The workshop serves as a platform to enable research at the edge of various disciplines.

The scope of the workshop covers among others quantum simulations, quantum algorithms, and (classical or quantum) machine-learning algorithms with a focus on application in Physics and Medicine.

List of topics:
- machine learning methods in medical applications,
- machine learning methods in high-energy physics and astrophysics,
- quantum machine learning,
- Generative Adversarial Networks for fast simulations both in medicine and particle physics,
- quantum simulations,
- quantum and quantum-inspired computing algorithms,
- novel methods in medical imaging,
- High-Performance Computing (HPC) in physics and medicine, in particular on heterogeneous platforms such as FPGA and GPU.

The workshop is planned to operate in an on-site format. More information and details will be available in due time at: https://events.ncbj.gov.pl/event/141/

Feel free to share this invitation among your peers and whoever you think would be interested. Please, do not hesitate to contact us in case of any questions: wmlq2022@ncbj.gov.pl