

DATA SCIENCE COLLOQUIUM (WINTER TERM 2021/22)



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Machine Learning for X-Ray and cryoEM at SLAC

Within the US Department of Energy's national lab system, the wealth of data, access to robust automation, and requirements for control, simulation, and data acquisition, make "big science" experiments — telescopes, particle accelerators, etc. — ideal targets for machine learning. In this talk I will describe SLAC National Accelerator Laboratory's approach to machine learning applications for x-ray and cryogenic electron microscopy (cryo-EM) experiments. I will highlight several examples in autonomous optimization of accelerators, analysis and acquisition of x-ray free-electron laser data, and single-particle imaging from cryo-EM experiments.

Chair: Dr. Thomas J. Lane

This term's Data Science Colloquium is organized in a hybrid format. Please subscribe here (<https://lists.desy.de/sympa/subscribe/datasciencecolloquium>) to our mailing list for the online Zoom links or for registering for the on-site event in the DESY Auditorium via Indico.



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