Heterogeneous Data and Large Representation Models in Science

Contribution ID: **13**   Type: **Oral presentation**

Leveraging AI in computational physics with NVIDIA Modulus and TorchFort

Thursday 3 October 2024 10:35 (35 minutes)

NVIDIA supports the scientific community in leveraging data-driven and AI approaches in computational physics workflows. This talk will showcase how researchers use NVIDIA's open-source libraries like Modulus to integrate learning methods with scientific solvers. Specifically, it will focus on recent results that facilitate AI in-the-loop approaches and enable on-the-fly training and inference during computation thanks to the open-source library TorchFort. Finally, it will introduce a blueprint that new users can follow to replicate this in their simulation workflows, unlocking new areas of research without compromising the speed of their high-performance solvers.

Contribution length

Middle

Primary authors: LAPEYRE, Corentin (NVIDIA); PARIENTÉ, Frédéric (NVIDIA); LOPPI, Niki (NVIDIA)

Presenters: LAPEYRE, Corentin (NVIDIA); PARIENTÉ, Frédéric (NVIDIA)