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Data-driven modelling of a laser-plasma accelerator using ensemble models

Friday 25 November 2022 15:00 (10 minutes)

Laser-plasma accelerators are promising candidates for driving compact undulator radiation sources. Future applications would greatly benefit from optimization by data-driven modelling of the acceleration process, but intrinsic noise and large parameter spaces poses a problem for conventional modelling methods. At LUX beamline we use an ensemble of neural networks and bootstrap aggregation to extract a model robust to noise and outliers.

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