Contribution ID: **7** Type: **Presentation**

Reinforcement Learning for FEL performance optimization

Sunday 6 October 2019 16:15 (15 minutes)

The theory behind various optimization techniques is often not trivial, however their implementation on complex systems such as a Free Electron Lasers could be even more challenging.
In this talk we will present the experience gained using a Machine Learning technique called Reinforcement Learning for the performance optimization of the seeded FEL FERMI.
In particular, the difficulties encountered during its implementation in MATLAB, the obtained results and the possible future developments will be discussed.

Author: BRUCHON, Niky (University of Trieste)

Co-authors: GAIO, Giulio (Elettra-Sincrotrone Trieste S.C.p.A.); LONZA, Marco (Elettra Sincrotrone Trieste)

Presenter: BRUCHON, Niky (University of Trieste)

Session Classification: Contributions 2