

Title

Automation, performance optimization & ML@Elettra

Abstract

At Elettra Sincrotrone Trieste there are several ongoing activities regarding Machine Learning and automation.

A research driven activity investigating Reinforcement Learning for the optimization of the FERMI Free Electron Laser has been carried out with promising results.

A framework based on the concept of Behavior Tree is employed in the autonomous operation of the Elettra accelerator.

The combination of human defined automation and automatic optimization, improved by ML, is the baseline for the future developments.