Contribution ID: **27**   Type: **Poster**

NARX Neural Prediction of Oscilational Instability at the IBR-2M reactor

Friday 8 July 2022 11:15 (45 minutes)

During the start-up regime of the IBR-2M power fluctuations appear, which the AR system dampens. Their origin is not completely clear, however it is known that the major reactivity sources are from design - respectively the OPO and DPO reflectors (axial fluctuations towards the active zone and their relative phase of intersecting each other facing the center of the active zone).
A neuromorphic solution is sought to anticipate (5-10 s) such fluctuations. I present encouraging preliminary results obtained with a Non-linear Autoregressive Exogenous neural network, the main features of the fluctuations being anticipatable.

Agreement to place

Participants agree to post their abstracts and presentations online at the workshop website. All materials will be placed in the form in which they were provided by the authors

Author: DIMA, Mihai-Tiberiu (JINR - MLIT)

Presenter: DIMA, Mihai-Tiberiu (JINR - MLIT)

Session Classification: Posters