

Building a pulsar timing pipeline for ARGOS

Wednesday, November 19, 2025 10:05 AM (15 minutes)

ARGOS-CDS is the design study phase for the planned ARGOS telescope, a leading-edge, low-cost radio interferometer to be built in Europe. It will perform continuous wide-field monitoring in between 1 GHz and 3 GHz, and high-cadence, high-SNR observations of all PTA pulsars as the most sensitive instrument in the EPTA.

The pulsar science pipeline, arpa, for ARGOS is being developed as new, open-source software inspired by TOASTER. It is mainly written in rust, a relatively young, high performance systems language with a focus on type and memory safety. Arpa aims to be both modular and efficient, utilising the widely supported Postgresql for database keeping and psrchive for pulsar archive manipulation.

Primary author: GULLIN, Samuel (Argos / Forth / Univerity of Crete)

Presenter: GULLIN, Samuel (Argos / Forth / Univerity of Crete)

Session Classification: Day 2