Contribution ID: **13**   Type: **Science Enabling tools**

SKA HPC Co-design

Thursday, 1 June 2023 17:30 (15 minutes)

The processing of a significant amount of data generated by the Square Kilometre Array (SKA) radio telescopes to produce scientific data products for answering complex radio astronomical questions requires high-performance supercomputers. However, the Science Data Processors (SDPs), which are one of the primary processing facilities of SKA, have limited power resources. Thus, it is crucial to evaluate different hardware solutions and software optimizations to minimize procurement risks for the SDP.

To this end, the SKA CO-design and OPtimisation (SCOOP) team is working on the SW/HW co-design for the SDP. The presentation will discuss the main activities performed by the SCOOP team, including the development of the SDP benchmark suite for hardware evaluation, initial study and profiling of the calibration pipelines, and benchmarking and optimization of radio-astronomical algorithms developed by the SKA Software Teams.

The presentation will conclude by outlining SCOOP's work plan for the next phase, which involves enhancing the SDP benchmark suite and benchmarking new and promising hardware for the SDP.

Primary authors: Dr CORDA, Stefano (EPFL); Mr STUTZ, Manuel (FHWN)

Presenter: Dr CORDA, Stefano (EPFL)

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