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Time-domain Machine Learning - Opportunities and Challenges for the SKA

Tuesday, 18 September 2018 16:15 (30 minutes)

Abstract: To harness the discovery potential of data collected by the SKA, we require efficient and effective automated data processing methods. Machine learning tools have the potential to deliver this capability, as evidence via their successful application to similar problems in the astronomy domain. This talk introduces the machine learning required for successful time-domain data processing (pulsar / transient discovery), and the infrastructure required to support it. Here the overriding aim is to increase awareness of what is required to facilitate the execution of automated learning methods, which we'll need if we are to achieve the SKA's ambitious science goals.

Biography: Machine Learning Researcher in the SKA Group, School of Physics & Astronomy @ The University of Manchester. Member of the Central Signal Processor (CSP) Consortia, working on the design of the Pulsar Search Sub-system (PSS). Member of the SDP Consortia, Non-Imaging Processing Specialist (Pulsar/transient search, Pulsar Timing). Software engineer in a past life.

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