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## Capitalizing on Artificial Intelligence for LSS Cosmology

*Thursday, November 30, 2023 10:00 AM (1 hour)*

In this review talk, I will show how artificial intelligence can bring tangible benefits to cosmological analysis of large-scale structure.

I will focus on how the use of AI in the framework of Simulations-Based Inference to achieve scientific objectives that would not be attainable with classical 2-pt function analyses. I will show three avenues where, in my opinion, AI can bring the most benefits: reaching the information floor of limited survey data via SBI analysis, accelerating simulations for SBI, and breaking degeneracies between cosmological probes and astrophysical nuisance fields. I will discuss new challenges that come with AI-based analyses. Finally, I will present outlook for exciting future applications for AI analysis of LSS.

**Presenter:** Dr KACPRZAK, Tomasz (ETH Zurich/ Swiss Data Science Center)

**Session Classification:** Review presentations

**Track Classification:** Paris