



HAMLET August 19 - 21, 2024
Copenhagen, Denmark
How to Apply Machine Learning to
Experimental & Theoretical
PHYSICS

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Type: **Plenary**

Data challenges for black-hole image reconstruction and feature identification

Monday, 19 August 2024 15:10 (25 minutes)

Black holes hold a tremendous discovery potential, and experiments such as the Event Horizon Telescope and its next generation upgrade could provide important cues about their structure. I will present a pedagogical discussion on the most relevant features in black-hole images (e.g. photon rings) and their detectability using realistic telescope arrays. I will focus on the structure of Fourier-plane data when expressed in terms of standard interferometric variables known as closure quantities, and motivate the use of machine learning to identify specific features and quantify observational uncertainties.

Primary author: CARBALLO-RUBIO, Raúl (Southern Denmark University (SDU))

Presenter: CARBALLO-RUBIO, Raúl (Southern Denmark University (SDU))

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