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Quantitative comparison of deep-learning network architectures for gravitational wave parameter inference

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Quick and accurate parameter inference in gravitational wave (GW) data is highly desirable for online searches of GW sources. For this purpose, the usage of machine learning and deep learning algorithms is an attractive possibility. However, while general time-series classification has been extensively studied in literature, there being a number of architectures designed specifically with this task in mind, the usage of these techniques to obtain some generating parameters is comparatively rare. In this talk, I will discuss some of the leading architectures for time series classification and present a performance comparison of these networks when adapted to a GW parameter estimation task.

Presenter: FREITAS, Osvaldo (University of Minho)