

## Einladung zum ICP-Kolloquium (online)

**Dr. Jack Araz**  
**Durham University, UK**

hält am

**Montag, 23.10.2023, 14:00 Uhr**

via zoom

<https://us06web.zoom.us/j/83395309032?pwd=GaBZ98y5vrK4JAihHhPz2bN9KvPHgL.1>

Meeting-ID: 833 9530 9032

Kenncode: 629490

einen Vortrag über das Thema:

### **“Theory-driven Quantum Machine Learning for HEP ”**

Abstract:

Machine Learning is, in most cases, powerful but a black-box application. In this talk, we will tackle this very problem from a quantum mechanics point of view, arguing that an optimisation problem, such as classification or anomaly detection, can be studied by “rephrasing” the problem as a quantum many-body system or a mixed state. Such an approach allows us to employ the entire arsenal of quantum theory for data analysis techniques. Hence this talk will present a small step towards fully theory-driven and interpretable quantum machine learning applications.

Interessenten sind herzlich eingeladen.

Prof. Dr. C. Holm  
Dr. Rudolf Weeber  
Dr. Alexander Schlaich