

Session Program

28 February 2019 to 1 March 2019

Deep Learning in the Natural Sciences

Talk

Hamburg

Thursday 28 February

13:00

Talk: Talks I

Session | Location: Hamburg | Convener: Marcus Brueggen

13:00–13:20 **Opening**

Speakers

Gregor Kasieczka, Marcus Brueggen

13:20–14:00 **Collision Course: Particle Physics as a Machine-Learning Testbed**

Speaker

Jesse Thaler

14:00–14:40 **Machine Learning Techniques in Cosmological Simulation**

Speaker

Claudio Gheller

14:40–15:00 **Low-dose X-ray Imaging with Deep Neural Networks**

Speaker

Xiaogang Yang

15:00

15:40

Talk: Talks II

Session | Location: Hamburg

15:40–16:20 **Machine Learning Techniques in Astroparticle Physics**

Speaker

Dominik Elsaesser

16:20–17:00 **Rise of the Tagging Machines**

Speakers

Tilman Plehn, Tilman Plehn

17:00–17:40 **Machine Learning for Diffractive Imaging and Crystallography**

Speaker

Filipe Maia

18:00

Friday 1 March

09:00

Talk: Talks III

Session | **Location:** Hamburg | **Convener:** Johannes Haller

09:00–09:40 **Deep Learning in Particle and Astroparticle Physics**

Speaker

Martin Erdmann

09:40–10:00 **A metric for collider events**

Speaker

Patrick Komiske

10:00–10:20 **Radio Galaxy Classifications with Deep Learning**

Speaker

Vesna Lukic

10:20–10:40 **Particle identification on the DAMPE experiment**

Speaker

David Francois Droz

10:40–11:00

Machine learning with augmentation for boosting di-Higgs searches at the LHC

Speaker

Won Sang Cho

11:00

11:30

Talk: Talks IV

Session | **Location:** Hamburg | **Convener:** Gregor Kasieczka

11:30–12:10 **Application of Generative Models to Natural Science**

Speakers

Fedor Ratnikov, Fedor Ratnikov

12:10–12:30 **Towards data-driven particle physics classifiers**

Speaker

Eric Metodiev

12:30–12:50 **Autoencoding New Physics**

Speakers

Jennifer Thompson, Jennifer Thompson

12:50–13:10 **CNN Classification of X-ray Selected Clusters**

Speaker

Matej Kosiba

13:10–13:30 **Closing Discussion**

Speaker

Peter Schleper

13:30