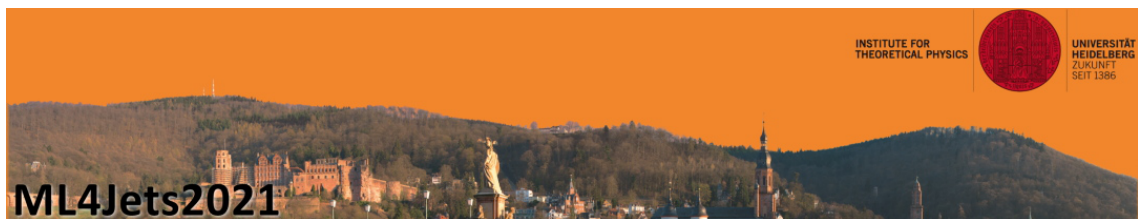


## Session Program

Jul 6 - 8, 2021



## ML4Jets2021

***Simulation and Generative Models***

## Wed, July 7

2:00 PM

### Simulation and Generative Models: Detector Simulation

**Session** | **Location:** Philosophenweg 12, 69120 Heidelberg, Germany | **Conveners:**  
Ramon Winterhalder, Dalila Salamani

14:00 - 14:20

#### CaloFlow: Fast and Accurate Generation of Calorimeter Showers with Normalizing Flows

**Speaker**

Dr Claudius Krause

14:20 - 14:40

#### Multi-detector geometry modeling and Geant4 Integration

**Speaker**

Dalila Salamani

14:40 - 15:00

#### Angular Conditioning of Deep Generative Models for Fast Simulation of High Granularity Calorimeters

**Speaker**

Peter McKeown

15:00 - 15:20

#### Fast and Accurate Electromagnetic and Hadronic Showers from Generative Models

**Speaker**

Engin Eren

15:20 - 15:40

#### AtIFast3: The next generation of fast simulation in ATLAS

**Speaker**

Joshua Falco Beirer

3:40 PM

3:40 PM

### Simulation and Generative Models: Event and Jet Generation

**Session** | **Location:** Philosophenweg 12, 69120 Heidelberg, Germany | **Conveners:**  
Dalila Salamani, Ramon Winterhalder

15:40 - 16:00

#### Fast Simulation of Jets with VAEs

**Speaker**

Mary Touranakou

16:00 - 16:20

#### Foundations of a Fast, Data-Driven, Machine-Learned Simulator

**Speakers**

Jessica N. Howard, Jessica N. Howard

16:20 - 16:40

#### Particle Cloud Generation with Message Passing GANs

**Speaker**

Raghav Kansal

16:40 - 17:00

#### White Box AI for parton shower development

**Speaker**  
Felix Ringer

17:00 - 17:20 **How to GAN Event Unweighting**

**Speaker**  
Mr Mathias Backes

17:20 - 17:40 **Sparse Data Generation with Convolutional VAE**

**Speaker**  
Breno Orzari

17:40 - 18:00 **Super-Resolution for QCD and Top Jets**

**Speaker**  
Lukas Blecher

6:00 PM