

**string\_data: workshop on data  
science and string theory**

**Report of Contributions**

Contribution ID: 0

Type: **not specified**

# Counting String Standard Models

*Monday, 26 March 2018 10:30 (45 minutes)*

**Presenter:** Prof. LUKAS, Andre (University of Oxford)

Contribution ID: 1

Type: **not specified**

## **Machine Learning Calabi-Yau Volumes**

*Monday, 26 March 2018 11:15 (45 minutes)*

**Presenter:** Prof. SEONG, Rak-Kyeong (Tsinghua University)

Contribution ID: 2

Type: **not specified**

## **Machine learning in astrophysics & cosmology**

*Monday, 26 March 2018 14:00 (45 minutes)*

I present an overview of machine learning methods as they are applied in astrophysics and cosmology, and highlight both new developments and real problems that are facing the field.

**Presenter:** Dr HOYLE, Ben (MPE/USM Munich)

Contribution ID: 3

Type: **not specified**

# Topological Data Analysis for Cosmology and String Theory

*Monday, 26 March 2018 14:45 (45 minutes)*

**Presenter:** Prof. SHIU, Gary (University of Wisconsin-Madison)

Contribution ID: 4

Type: **not specified**

# The Early Universe Information Bottleneck

*Monday, 26 March 2018 16:15 (45 minutes)*

**Presenter:** Dr FRAZER, Jonathan (DESY)

Contribution ID: 5

Type: **not specified**

# **Classification of Quasi-Realistic Heterotic String Vacua**

*Monday, 26 March 2018 17:00 (30 minutes)*

**Presenter:** Mr HARRIES, Glyn (University of Liverpool)

Contribution ID: 6

Type: **not specified**

## Data in (F-theory) flux

*Tuesday, 27 March 2018 09:00 (45 minutes)*

**Presenter:** Dr WEIGAND, Timo (CERN)



Contribution ID: 7

Type: **not specified**

# **Anomaly Detection: Mapping the IIB Lamppost with Reinforcement Learning**

*Wednesday, 28 March 2018 11:00 (45 minutes)*

**Presenter:** Prof. HALVERSON, James (Northeastern University)

Contribution ID: 8

Type: **not specified**

# **Big Data and Machine Learning in the Heterotic Orbifold Landscape**

*Tuesday, 27 March 2018 11:00 (45 minutes)*

**Presenter:** Dr VAUDREVANGE, Patrick (TU Munich)

Contribution ID: 9

Type: **not specified**

## Deeping-learning the Landscape

*Tuesday, 27 March 2018 11:45 (45 minutes)*

**Presenter:** Prof. HE, Yang-Hui (City, University of London, Merton College, Oxford & Nankai University)

Contribution ID: **10**

Type: **not specified**

# **Applications of Machine Learning techniques at the ATLAS Collaboration**

*Tuesday, 27 March 2018 14:00 (45 minutes)*

**Presenter:** Mr HANDL, David (LMU Munich)

Contribution ID: 11

Type: **not specified**

## **Classifying fibration structures in Calabi-Yau constructions**

*Tuesday, 27 March 2018 14:45 (45 minutes)*

**Presenter:** Prof. GRAY, James (Virginia Tech)

Contribution ID: 12

Type: **not specified**

# Learning the non-Higgsable gauge groups in 4D F-theory

*Tuesday, 27 March 2018 16:15 (30 minutes)*

**Presenter:** WANG, Yinan (MIT)

Contribution ID: 13

Type: **not specified**

## **Persistent Homology and Flux Vacua**

*Tuesday, 27 March 2018 16:45 (30 minutes)*

**Presenter:** COLE, Alex (University of Wisconsin-Madison)

Contribution ID: 14

Type: **not specified**

## **Axion hierarchies from Kahler cones**

*Wednesday, 28 March 2018 09:00 (45 minutes)*

**Presenter:** Prof. MCALLISTER, Liam (Cornell University)



Contribution ID: 15

Type: **not specified**

## **Vacuum selection from Cosmology on Networks of String Vacua**

*Wednesday, 28 March 2018 09:45 (45 minutes)*

**Presenter:** Dr LONG, Cody (Northeastern University)

Contribution ID: 16

Type: **not specified**

## **Data creation with Generative Adversarial Networks**

*Tuesday, 27 March 2018 09:45 (45 minutes)*

**Presenter:** Dr RUEHLE, Fabian (University of Oxford)

Contribution ID: 17

Type: **not specified**

## **Machine learning at Belle II**

*Wednesday, 28 March 2018 11:45 (30 minutes)*

**Presenter:** Mr KAHN, James (The University of Melbourne)

Contribution ID: **18**

Type: **not specified**

## **Landscape and Complexity Catastrophe & Report on developments in mathematical software**

*Wednesday, 28 March 2018 14:00 (45 minutes)*

**Presenter:** Prof. DOUGLAS, Michael (Stony Brook University)

Contribution ID: 19

Type: **not specified**

## **Challenging the Refined Swampland Distance Conjecture in Calabi-Yau Moduli Spaces**

*Wednesday, 28 March 2018 14:45 (30 minutes)*

**Presenter:** KLAEWER, Daniel (Max Planck for Physics)

Contribution ID: 20

Type: **not specified**

## History and perspectives

*Wednesday, 28 March 2018 16:00 (45 minutes)*

**Presenter:** Prof. SCHELLEKENS, Bert (Nikhef)

Contribution ID: **21**

Type: **not specified**

## Discussion

*Wednesday, 28 March 2018 16:45 (1h 15m)*

Contribution ID: 22

Type: **not specified**

## **WG1: Datasets in String Theory**

*Thursday, 29 March 2018 09:00 (1h 30m)*

**Presenters:** Dr MAYRHOFER, Christoph (LMU Munich); Dr LONG, Cody (Northeastern University)



Contribution ID: 23

Type: **not specified**

## **WG2: Quo vadis string landscape?**

*Thursday, 29 March 2018 11:00 (1h 30m)*

**Presenters:** Prof. MCALLISTER, Liam (Cornell University); Dr WEIGAND, Timo (CERN)

Contribution ID: 24

Type: **not specified**

## **WG3: Machine learning tools for string theory**

*Thursday, 29 March 2018 14:00 (1h 30m)*

**Presenters:** Dr RUEHLE, Fabian (University of Oxford); Prof. HALVERSON, James (Northeastern University)