ML-at-SLAC 1st Workshop

Report of Contributions

Contribution ID: **3**   Type: **not specified**

Introduction

Tuesday, 19 February 2019 10:00 (5 minutes)

Presenter: TERAO, Kazuhiro (SLAC)

Session Classification: Morning

Contribution ID: 4   Type: **not specified**

Deep Learning at the Particle Physics Energy Frontier

Tuesday, 19 February 2019 10:05 (10 minutes)

Presenter: Dr KAGAN, Michael (SLAC)

Session Classification: Morning

Contribution ID: **5**   Type: **not specified**

HEP - Intensity Frontier: Deep Neural Networks for 2D/3D Particle Image Analysis

Tuesday, 19 February 2019 10:15 (10 minutes)

Presenters: TERAO, Kazuhiro (SLAC);   DOMINE, Laura (Stanford University)

Session Classification: Morning

Contribution ID: **6**   Type: **not specified**

HEP - Cosmic Frontier: Deep Generative Models for Astronomical Catalogs

Tuesday, 19 February 2019 10:25 (10 minutes)

Presenter: Dr MARSHALL, Philip (SLAC)

Session Classification: Morning

Contribution ID: **7** · Type: **not specified**

Stanford Galaxy Formation and Cosmology ML Research

Tuesday, 19 February 2019 10:35 (10 minutes)

Presenters: MCLAUGHLIN, Sean (Stanford University); MORNINGSTAR, Warren (Stanford University)

Session Classification: Morning

Contribution ID: **9** Type: **not specified**

Machine Learning for the Heavy Photon Search

Tuesday, 19 February 2019 10:45 (10 minutes)

Presenters: Dr SOLT, Matthew (SLAC); Dr MORENO, Omar (SLAC)

Session Classification: Morning

Contribution ID: **10**   Type: **not specified**

Improving Particle Accelerator Models with Machine Learning

Tuesday, 19 February 2019 11:15 (10 minutes)

Presenter: Dr EDELEN, Auralee (SLAC)

Session Classification: Morning

Contribution ID: **11**   Type: **not specified**

Bayesian optimization for FEL tuning: a step towards autonomous operation

Tuesday, 19 February 2019 11:25 (10 minutes)

Presenter: Dr DURIS, Joseph (SLAC)

Session Classification: Morning

Contribution ID: **12** Type: **not specified**

Machine Learning based Analysis, Accelerator Directorate

Tuesday, 19 February 2019 11:35 (15 minutes)

Presenter: Dr O'SHEA, Brendan (SLAC)

Session Classification: Morning

Contribution ID: **13** Type: **not specified**

ML Study: SPEAR3 BTS Injection Efficiency

Tuesday, 19 February 2019 11:50 (10 minutes)

Presenter: WANG, Faya (SLAC)

Session Classification: Morning

Contribution ID: **14** Type: **not specified**

CryoET of Cells

Tuesday, 19 February 2019 13:00 (10 minutes)

Presenters: Prof. CHIU, Wah (SLAC); LI, Yee (SLAC)

Session Classification: Afternoon

Contribution ID: 16   Type: **not specified**

Machine learning in computational surface chemistry

Tuesday, 19 February 2019 11:05 (10 minutes)

Presenter: Dr VOSS, Johannes (SLAC)

Session Classification: Morning

Contribution ID: **17** Type: **not specified**

Data-driven discovery of plasma physics

Tuesday, 19 February 2019 13:30 (10 minutes)

Presenter: Dr ALVES, Paulo (SLAC)

Session Classification: Afternoon

Contribution ID: 18   Type: **not specified**

Deploying ML In Hardware: FPGAs & ASICs

Tuesday, 19 February 2019 13:40 (10 minutes)

Presenter: Dr HERBST, Ryan (SLAC)

Session Classification: Afternoon

Contribution ID: **19**   Type: **not specified**

Machine Learning at the Edge : High velocity data inferencing

Tuesday, 19 February 2019 13:50 (10 minutes)

Presenters: THERRIEN, Audrey (SLAC);   QUIJANO, Omar (SLAC);   Dr COFFEE, Ryan (SLAC)

Session Classification: Afternoon

Contribution ID: **20** Type: **not specified**

Machine Learning in SFX and SPI

Tuesday, 19 February 2019 14:00 (10 minutes)

Presenter: Dr YOON, Chun Hong (SLAC)

Session Classification: Afternoon

Contribution ID: **21**   Type: **not specified**

Accelerating Discoveries by iterating machine learning with high throughput experiments and computations

Tuesday, 19 February 2019 13:20 (10 minutes)

Presenter: Dr MEHTA, Apurva (SLAC)

Session Classification: Afternoon

Contribution ID: **22** Type: **not specified**

Machine Learning for Double Beta Decay with EXO-200

Tuesday, 19 February 2019 13:10 (10 minutes)

Presenter: KAUFMAN, Lisa (SLAC)

Session Classification: Afternoon

Contribution ID: **23**   Type: **not specified**

Awesome ML Posters

Tuesday, 19 February 2019 14:10 (1 hour)

Bayesian optimization of FEL pulse energy

Data-driven discovery of plasma physics

Machine Learning at the Heavy Photon Search Experiment

A Statistical Approach to Recognizing Source Classes for Unassociated Sources in Fermi-LAT Catalogs

Identify undetected galaxies with conventional and machine learning techniques

Temporal Electric Field Reconstruction

Bayesian Cosmological Inference with CNNs

Ultrafast Processing of Pixel Detector Data with Machine Learning

SPEAR3 BTS Injection Efficiency

Machine Learning to digest CookieBox Data

Constrained BEEF-type Functionals for Catalysis

Meta-GGA and hybrid Bayesian error estimation functionals

Accelerating ab initio calculations using surrogate machine learning models

Model Independent Analysis of Beam Centroid Data for LCLS

Machine Learning In Hardware

Applying Deep Neural Network Techniques For LArTPC Data Reconstruction

Semi-Supervised Classification of Astronomical Time Series

Power Prediction from Electron Phase with Vision-based Neural Network

Peak finding for crystallography

Gaussian Processes for Bayesian Deconvolution and Source Separation: Applications to XFEL Spectroscopy

Machine Learning in Tapered Free Electron Laser: Power Optimization and Sideband Identification

Presenters: LOUKIANOV, Anton (SLAC); THERRIEN, Audrey (SLAC); Dr EDELEN, Auralee (SLAC); Dr YOON, Chun Hong (SLAC); EMMA, Claudio (SLAC); WANG, Faya (SLAC); BLAJ, Gabriel (SLAC); VAN DEN BEDEM, Henry (Stanford University); PARK, Ji Won (Stanford University); TORRES, Jose (Stanford University); Dr DURIS, Joseph (SLAC); WU, Juhao (SLAC); BROWN, Kristopher (Stanford University); DOMINE, Laura (Stanford University); Dr MONZANI, Maria Elena (SLAC); Dr ALVES, Paulo (SLAC); LI, Ponan (SLAC); Dr HERBST, Ryan (SLAC); OLIVEIRA, Saulo (Stanford University); MCLAUGHLIN, Sean (Stanford University); KAMATH, Sowmya (Stanford University); COLOCHO, William (Stanford University); ZHANG, Xiao (Stanford); HUANG, Xiaobiao (SLAC); REN, Xinyu (SLAC); MAIMAITI, Yasheng (Stanford University)

Session Classification: Poster presentation + caffeine break