Accelerating Physics with ML@MIT

Report of Contributions

Contribution ID: **1** Type: **not specified**

LIGO O4 Hackathon

Contribution ID: **2**

Type: **not specified**

LIGO O4 Hackathon

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

Workshop– Hackthon session #1

Work on ML infrastructure and code deployment and debugging

Presenter: GUNNY, Alec (MIT)

Contribution ID: **4**

Type: **not specified**

Workshop

Contribution ID: **5**

Type: **not specified**

Wrap up

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

LIGO Run O4 Hackathon

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

LIGO Run O4 Hackathon

Contribution ID: **8**   Type: **not specified**

test

Presenter: HARRIS, Philip Coleman (Massachusetts Inst. of Technology (US))

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

Software Infrastructure Challenges for IaaS with HEP (20'+10')

Monday 30 January 2023 16:00 (35 minutes)

Presenter: PEDRO, Kevin (Fermi National Accelerator Lab. (US))

Session Classification: Workshop Discussion #4

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

SONIC Inference as a Service for Point Clouds

Monday 30 January 2023 16:35 (25 minutes)

Presenter: FENG, Yongbin (Fermi National Accelerator Lab. (US))

Session Classification: Workshop Discussion #4

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

ML GPU deployments for Neutrino Reconstruction

Monday 30 January 2023 17:00 (30 minutes)

Presenter: YANG, Tingjun (Fermi National Accelerator Lab. (US))

Session Classification: Workshop Discussion #4

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

Anomaly detection for EM

Tuesday 31 January 2023 09:00 (20 minutes)

Presenter: MUTHUKRISHNA, Daniel (MIT)

Session Classification: Workshop Discussion #5

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

Anomaly detection in GW

Tuesday 31 January 2023 09:20 (20 minutes)

Presenter: RAIKMAN, Ryan (Carnegie Mellon University)

Session Classification: Workshop Discussion #5

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

MLY Pipeline

Tuesday 31 January 2023 09:40 (20 minutes)

Presenter: SKLIRIS, Vasileios (Cardiff University)

Session Classification: Workshop Discussion #5

Contribution ID: 15   Type: **not specified**

Anomaly Detection in HEP

Tuesday 31 January 2023 10:00 (20 minutes)

Presenter: GOVORKOVA, Katya (Massachusetts Inst. of Technology (US))

Session Classification: Workshop Discussion #5

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

The Challenges of Identification, Classification and Inference for Time-domain Astrophysics with Big Data

Monday 30 January 2023 14:00 (30 minutes)

Presenter: VILLAR, Ashley

Session Classification: Workshop Discussion #3

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

Multi-messenger astronomy infrastructure for optical follow-ups

Monday 30 January 2023 14:30 (30 minutes)

Presenter: MALANCHEV, Konstantin

Session Classification: Workshop Discussion #3

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

Workshop goals

Monday 30 January 2023 09:00 (30 minutes)

Presenter: HARRIS, Philip Coleman (Massachusetts Inst. of Technology (US))

Session Classification: Workshop Discussion #1

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

Inference-as-a-service in high energy physics

Monday 30 January 2023 09:30 (30 minutes)

Presenter: MCCORMACK, William Patrick (Massachusetts Inst. of Technology (US))

Session Classification: Workshop Discussion #1

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

Inference-as-a-service in gravitational-wave physics

Monday 30 January 2023 10:00 (30 minutes)

Presenters: GUNNY, Alec; GUNNY, Alec

Session Classification: Workshop Discussion #1

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

Searches for compact binary coalescences-I

Monday 30 January 2023 11:00 (15 minutes)

Presenters: BEVERIDGE, Damon; BEVERIDGE, Damon

Session Classification: Workshop Discussion #2

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

Searches for compact binary coalescences-II

Monday 30 January 2023 11:15 (15 minutes)

Presenters: MARX, Ethan (MIT);   MARX, Ethan

Session Classification: Workshop Discussion #2

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

Denoising methods-I

Monday 30 January 2023 11:30 (15 minutes)

Presenter: MUHAMMED, Saleem

Session Classification: Workshop Discussion #2

Contribution ID: **24**　　　　　　　　　　　　　　　　　Type: **not specified**

Denoising methods-II

Monday 30 January 2023 11:45 (15 minutes)

Presenters:　Dr CHOU, Chia-Jui (National Yang Ming Chiao Tung University);　CHOU, Chia-Jui

Session Classification:　Workshop Discussion #2

Contribution ID: **25**
Type: **not specified**

Parameter estimation methods

Monday 30 January 2023 12:00 (30 minutes)

Presenter: DAX, Maximillian

Session Classification: Workshop Discussion #2

Contribution ID: **26**
Type: **not specified**

Point-Voxel CNN

Tuesday 31 January 2023 11:00 (30 minutes)

Presenter: LIU, Zhijian

Session Classification: Workshop Discussion #6

Contribution ID: **27**   Type: **not specified**

Sparse GPU implementations

Tuesday 31 January 2023 11:30 (30 minutes)

Presenter: TANG, Haotian

Session Classification: Workshop Discussion #6

Contribution ID: 28　　　　　　　　　　　　　　　　　　Type: **not specified**

Computing at the Massachusetts Green High Performance Center

Tuesday 31 January 2023 12:00 (30 minutes)

Presenter: HILL, Chris

Session Classification: Workshop Discussion #6

Contribution ID: **29**　　　　　　　　　　　　　　　　Type: **not specified**

Challenges for identifying and following-up the next kilonova

Monday 30 January 2023 15:00 (30 minutes)

Presenter:　SRAVAN, Niharika

Session Classification:　Workshop Discussion #3

Contribution ID: **30**   Type: **not specified**

Machine learning applications in Icecube

Wednesday 1 February 2023 09:00 (20 minutes)

Presenter: PETERSON, Josh

Session Classification: Workshop Discussion #9

Contribution ID: **31**   Type: **not specified**

Pointing to a Supernova

Wednesday 1 February 2023 09:20 (20 minutes)

Presenter: SCHOLBERG, Kate

Session Classification: Workshop Discussion #9

Contribution ID: **32**   Type: **not specified**

Binary neutron star early warning detection using ML

Wednesday 1 February 2023 09:40 (15 minutes)

Presenter: MCLEOD, Alistair

Session Classification: Workshop Discussion #9

Contribution ID: **33**   Type: **not specified**

Localization and waveform extraction for compact binary coalescences

Wednesday 1 February 2023 09:55 (15 minutes)

Presenter: CHATTERJEE, Chayan

Session Classification: Workshop Discussion #9

Contribution ID: **34**   Type: **not specified**

Unsupervised Learning for TESS Variable Stars

Wednesday 1 February 2023 10:10 (20 minutes)

Presenter: AUDENAERT, Jeroen

Session Classification: Workshop Discussion #9

Contribution ID: **35**
Type: **not specified**

Unsupervised Learning for TESS Variable Stars

Presenter: AUDENAERT, Jeroen

Session Classification: Workshop Discussion #9

Contribution ID: **36**   Type: **not specified**

ML Workflows on NSERC

Tuesday 31 January 2023 14:00 (30 minutes)

Presenter: FARRELL, Steven (Lawrence Berkeley National Laboratory)

Session Classification: Workshop Discussion #7

Contribution ID: **37**

Type: **not specified**

HPC Discussion

Tuesday 31 January 2023 14:50 (30 minutes)

Session Classification: Workshop Discussion #7

Contribution ID: **38**
Type: **not specified**

Contextualized machine learning for applied data science

Wednesday 1 February 2023 10:30 (15 minutes)

Presenter: LENGERICH, Ben

Session Classification: Workshop Discussion #9

Contribution ID: **39**   Type: **not specified**

ML Algorithms at SDSC/NRP

Tuesday 31 January 2023 14:30 (20 minutes)

Presenter: WURTHWEIN, Frank (UCSD)

Session Classification: Workshop Discussion #7

Contribution ID: **40** Type: **not specified**

HEP

Wednesday 1 February 2023 11:30 (20 minutes)

Presenter: MCCORMACK, William Patrick (Massachusetts Inst. of Technology (US))

Session Classification: Workshop Discussion #10

Contribution ID: 41   Type: **not specified**

GW

Wednesday 1 February 2023 11:50 (20 minutes)

Presenters: CHATTERJEE, Deep; CHATTERJEE, Deep; CHATTERJEE, Deep

Session Classification: Workshop Discussion #10

Contribution ID: 42 Type: **not specified**

EM Astronomy

Wednesday 1 February 2023 12:10 (20 minutes)

Presenters: MUTHUKRISHNA, Daniel; MUTHUKRISHNA, Daniel; MUTHUKRISHNA, Daniel (MIT)

Session Classification: Workshop Discussion #10