

3<sup>rd</sup> KMI International School on  
“Machine Learning in Particle and Astrophysics”

# School organization

16 Nov 2020

Yoshitaka Itow for LOC  
ISEE/KMI, Nagoya Univ.

# Welcome

- School finally begins !
  - Thank you for patience. Let's start.
- International ML School covering wide area
  - >70 participants including Post-Doc, graduated, undergrad. ( and even professor ...)
  - Variety of fields
    - Particle theory, cosmology, colliders, cosmic rays, astrophysics,..
  - Variety of countries
    - Japan, China, India, Indonesia, Israel, Korea, Malaysia, Poland, Slovenia, Taiwan, UK, USA...

# Our Lecturers

- **Lecture: Basics for machine learning and hands-on tutorial**
  - Kazuhiro Terao (SLAC, USA) and
  - Francois Drielsma (SLAC,USA), Ashwin Ananda Mishra (SLAC,USA)
- **Topical seminars**
  - Luc Hendriks (Radboud University, Netherlands)
  - François Lanusse (CNRS, France)
  - Shiro Ikeda (ISM, Japan)
  - Yuta Nakashima (IDS, Osaka University, Japan)



# School program

JST		Nov 16 (Mon)	Nov 17 (Tue)	Nov 18 (Wed)	Nov 19 (Thu)	Nov 20 (Fri)
8:30-10:30	Slot1	Opening/ Basic-1	Basic-2	Basic-3	Basic-4	Tutorial-5
10:40-12:30	Slot2	Tutorial-1	Tutorial-2	Tutorial-3	Tutorial-4	Wrapup/ Closing
12:30-14:00	Lunch					
14:00-16:00	Slot3	Self Work/ Q&A	Virtual Poster	Self Work/ Q&A	Self Work/ Q&A	
16:30-18:00	Slot4	Topic-B	Topic-A	Topic-C	Topic-D	

Topic-B	Luc Hendriks	DarkMachines: a research collective of physicists and data scientists to solve dark matter problems using machine learning
Topic-A	S.Ikeda	Machine learning analysis in Event Horizon Telescope
Topic-C	F.Lanusse	Solving inverse problems with Deep Learning: Application to Weak Lensing Mass-Mapping
Topic-D	Y.Nakashima	Recent progresses in the machine learning and possible application to particle physics

# School Organization (1)

- Morning 8:30-12:30 : Basic lectures/Tutorial
  - Prerequisites and tutorial Jupyter notebook in Git here
  - <https://github.com/drinkingkazu/slacml-kmi2020/>
- Afternoon 14:00-16:00(Excpt Tue) : Self-working and Q/A
  - 11 Breakout rooms for group projects, self-working/discussion, socialization...
  - See Terao-san's email for detail.
- Afternoon 16:30-18:00 : 4 Topical seminars
- Online Teaching Assistants are available to assist you. Please consult through School Slack
- School photo on Thursday morning ~ 10:30
- At the last day, Wrap-up session for students projects. Please prepare.

# School Organization (2)

- School Indico
  - <https://agenda.hepl.phys.nagoya-u.ac.jp/indico/conferenceDisplay.py?ovw=True&confId=1282>
- All lectures and seminars are zoom-recorded, and will be available after school for a while.

# Virtual Poster Session (Tuesday 14:00-16:00)

- 1min. short-talk session for the 1<sup>st</sup> 20 min.
- Then 4 ZOOM breakout rooms in parallel.
  - 3 posters with each 30min. (14:30-, 15:00-, 15:30- )
  - Participants can freely move to rooms anytime.
  - Poster presenters please present repeatedly your poster/slides according participants discussion
- Poster award !
  - We will award to two distinct posters !
  - Special award will be given to winners !
  - Every participants can join voting !

# To Nagoya onsite participants

- We originally plan to open ES635 for in-person assistance and to attend lectures and seminars.
- Due to COVID19 case reported last week, we cancel it on Monday.
- For Tuesday-Friday, we will announce Monday evening according to university's decision.

# To YouTube streaming participants

- You are also welcome !
- Sorry for your inconvenience due to our limited support because of manpower. Please try School notebook by yourself if you like.
- If you have question or feedback, please put in YouTube comments or slido.com #60176
- We will try to respond as much as possible.

**Let's Start and Enjoy School !**