

Welcome to “AI & Physics”

09:00-17:00, January 28 @ 2BC

appliedmldays.org/tracks/ai-physics

Morning session:

9:00-12:35

- Physics and AI

Neural simulation-based inference With Gilles Louppe 🕒 09:00-09:30 January 28 View detail
Simulating the Universe with Machine Learning With Shirley Ho 🕒 09:30-10:00 January 28 View detail
Learning molecular models from simulation and experimental data With Cecilia Clementi 🕒 10:00-10:20 January 28 View detail
Tracking High Energy Particles with Deep Learning With Jean-Roch Vlimant 🕒 10:20-10:40 January 28 View detail
Break 🕒 10:40-11:00 January 28 View detail
Data ex Machina: Machine Learning with Public Collider Data With Eric Metodiev 🕒 11:00-11:20 January 28 View detail
Predicting phase transitions in many-body physics With Eliska Greplova 🕒 11:20-11:40 January 28 View detail
Exploring string theory solutions with reinforcement learning With Fabian Ruehle 🕒 11:40-12:00 January 28 View detail
Statistical physics for machine learning With Lenka Zdeborova 🕒 12:00-12:20 January 28 View detail
WIMPs or else? Using Machine Learning for Dark Matter Detection With Charanjit Kaur 🕒 12:20-12:35 January 28 View detail

Afternoon session:

13:30-17:00

- Panel discussion

- AI and Physics

- Industry

Panel discussion With Shirley Ho, Balazs Kegli, Danilo Jimenez Rezende, Lenka Zdeborova & Maurizio Pierini 🕒 13:30-14:00 January 28 View detail
Generative Models and Symmetries With Danilo Jimenez Rezende 🕒 14:00-14:30 January 28 View detail
Machine Learning in Physics and Beyond: experience at CERN openlab With Sofia Vallecora 🕒 14:30-14:50 January 28 View detail
Deep learning driven model discovery in physics With Remy Kusters 🕒 14:50-15:05 January 28 View detail
Break 🕒 15:05-15:30 January 28 View detail
Dynamic system modelling and neural simulators With Balazs Kegli 🕒 15:30-16:00 January 28 View detail
Probabilistic Inference in Simulators With Atılım Güneş Baydin 🕒 16:00-16:20 January 28 View detail
Deep learning from physics to financial services With Jeremie Abteboul 🕒 16:20-16:35 January 28 View detail
A deep neural network for simultaneous estimation of b quark energy and resolution for the CMS experiment With Nadezda Chernyavskaya 🕒 16:35-16:50 January 28 View detail
Can we optimize the operation of CERN's Large Hadron Collider with Machine Learning techniques? With Loic Coyle 🕒 16:50-17:00 January 28 View detail

Submit your questions

We have set up a sli.do which you can access with the link below

<https://app.sli.do/event/erak5ql0>

Or under **#AML_D_Physics** on <https://sli.do> and through the corresponding app

You can use this interface to submit questions and vote for the ones you think are most interesting.

We will use this for the panel discussion and during talks.

The image displays two views of the sli.do interface. On the left is the desktop web interface, and on the right is the mobile app interface.

Desktop Web Interface:

- Header: Top questions (44)
- Logo: sli.do
- Join at: **slido.com** #eventcode
- Questions list:
 - Question 1: Maria (M) - "Which of these approaches to targeting potential customers were most effective for your clients?" (23 votes)
 - Question 2: John (J) - "What's the next big thing in modern learning?" (12 votes)
 - Question 3: Steven (S) - "Where can we find further reading on this topic?" (7 votes)
 - Section: Latest question
 - Question 4: Anonymous - "Can you give us some examples for applying the second principle in practice?" (4 votes)

Mobile App Interface:

- Header: Main stage
- Navigation: QUESTIONS, POLLS
- Action: Ask the speaker
- Input: Type your question
- Summary: 44 questions, Popular
- Questions list:
 - Question 1: Maria (M) - "Which of these approaches to targeting potential customers were most effective for your clients?" (23 votes)
 - Question 2: John (J) - "What's the next big thing in modern learning?" (12 votes)
 - Question 3: Steven (S) - "Where can we find further reading on this topic?" (7 votes)
 - Question 4: Anonymous - "Can you give us some examples for applying the second principle in practice?" (4 votes)

Thanks to everyone who made this event possible!

Organizers:

Sabrina Amrouche, Stefano Carrazza, Frédéric Dreyer, Tobias Golling, Michael Kagan, Maurizio Pierini, David Rousseau, Slava Voloshynovskiy

Speakers:

Jeremie Abiteboul, Atılım Güneş Baydin, Nadezda Chernyavskaya, Cecilia Clementi, Loic Coyle, Eliska Greplova, Shirley Ho, Charanjit Kaur, Balazs Kegl, Remy Kusters, Gilles Louppe, Eric Metodiev, Evert van Nieuwenburg, Danilo Jimenez Rezende, Fabian Ruehle, Sofia Vallecorsa, Jean-Roch Vlimant, Lenka Zdeborová

AMLD contacts: Sylvain Bernard, Pauline Borg

Posters and participants!