ECT* TALENT School 2020
Trento, June 22 – July 10

Machine Learning applied to Nuclear Physics, experiment and theory

Lecturers and Organizers
Daniel Bazin (Michigan State University, USA) | Morten Hjorth-Jensen (Michigan State University, USA and University of Oslo, Norway) | Michelle Kuchera (Davidson College, USA) | Sean Liddick (Michigan State University, USA) | Raghuram Ramanujan (Davidson College, USA)

Student Coordinator and Advisor
Morten Hjorth-Jensen (Michigan State University, USA and University of Oslo, Norway)

Topics
Basic concepts of machine learning and data analysis and statistical concepts like expectation values, variance, covariance, correlation functions and errors | Estimation of errors using cross-validation and bootstrapping | Linear Regression and Logistic Regression | Dimensionality reductions, from PCA to clustering | Neural networks and deep learning | Convolutional Neural Networks and classification problems | Recurrent Neural Networks and Autoencoders | Decisions trees, random forests and boosting methods | Support vector machines and kernel transformations | Bayesian Neural Networks

Applications
Applications for the ECT* Talent School should be made electronically through the ECT* web page. It should include: a curriculum vitae, a 1-page description of academic and scientific achievements, a short letter expressing the applicants’ personal motivation for participating in the programme.
In addition, a reference letter from the candidate’s supervisor should be sent to:
Professor Jochen Wambach - Director of ECT* – Strada delle Tabarelle, 286 - 38123 Villazzano (TN) Italy
(email to Barbara Gazzoli gazzoli@ectstar.eu)

Deadline for applications: April 13, 2020
For further details see www.ectstar.eu