## Program: Lecture Series on "Machine Learning and its Applications"

October 7 - 11, 2019 Bethe Center for Theoretical Physics, Bonn

> Fabian Rühle CERN, Geneva

Time	Monday, 7 <sup>th</sup>	Tuesday, 8 <sup>th</sup>	Wednesday, 9 <sup>th</sup>	Thursday, 10 <sup>th</sup>	Friday, 11 <sup>th</sup>
9:00 - 10:00	Registration				
10:00 - 12:00 (including coffee break)	Lecture Neural networks I NN architecture	Lecture Neural networks II Training	Lecture Reinforcement Learning	Lecture Clustering and Feature Extraction	Lecture Genetic algorithms
12:00 - 14:00	Lunch break	Lunch break	Lunch break	Lunch break	End of program
14:00 - 16:00 (including coffee break)	Tutorial Implementing NNs with different libraries	Tutorial Classifying galaxies	Tutorial Ising model	<b>Tutorial</b> Illustration of different clustering algorithms	
17:00- 19:00	Reception				