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# Advanced Workshop on Accelerating the Search for Dark Matter with Machine Learning | (smr 3280)

## Tuesday 09 April 2019

**Tuesday, 9 April 2019 - PARTICLE PHYSICS - Adriatico Guest House - Kastler Lecture Hall  
(09:00-18:30)**

time	title	presenter
09:00	Searches for DM at the Large Hadron Collider	CATERINA DOGLIONI
09:45	Probabilistic Programming and Inference in Particle Physics	ATILAN GUNEBAYDIN
10:30	Coffee Break	
11:00	Boosting New Physics Searches with Machine Learning	DAVID SHIH
11:45	Magnifying (unknown) rare clusters to increase the chance of detection, using unsupervised learning	ERZSÉBET MERÉNYI
12:15	Variational Autoencoders	LUC HENDRIKS
12:35	Lunch Break	
14:20	Event Generation with Deep Generative Models	SYDNEY OTTEN
14:40	Recent results from the GAMBIT collaboration	MARTIN WHITE
15:00	Collider searches for Dark Matter at LHC using machine learning	CHARANJIT KAUR & MICHAEL SOUGHTON
15:20	Brainstorming + Status of challenges	
16:00	Coffee Break	
16:20	Work in groups	
17:30	IFPU lectures - Neural networks (from logistic regression to deep networks)	GILLES LOUPPE