Introduction (theory part)

SMP-J workshop (24.01.2018)
Hannes Jung, Mikko Voutillainen, Paolo Gunnellini

(DESY, University of Helsinki and HIP)

Goals of this workshop

→ Get an overview of recent theory developments
→ Start a discussion with theory community and experts
→ Get advices on our present measurements
→ Get an insight on which future measurements are needed

Third edition of this workshop:

→ Very friendly and open environment
→ It was always very helpful for us, in order to receive input and get closer to our theory colleagues
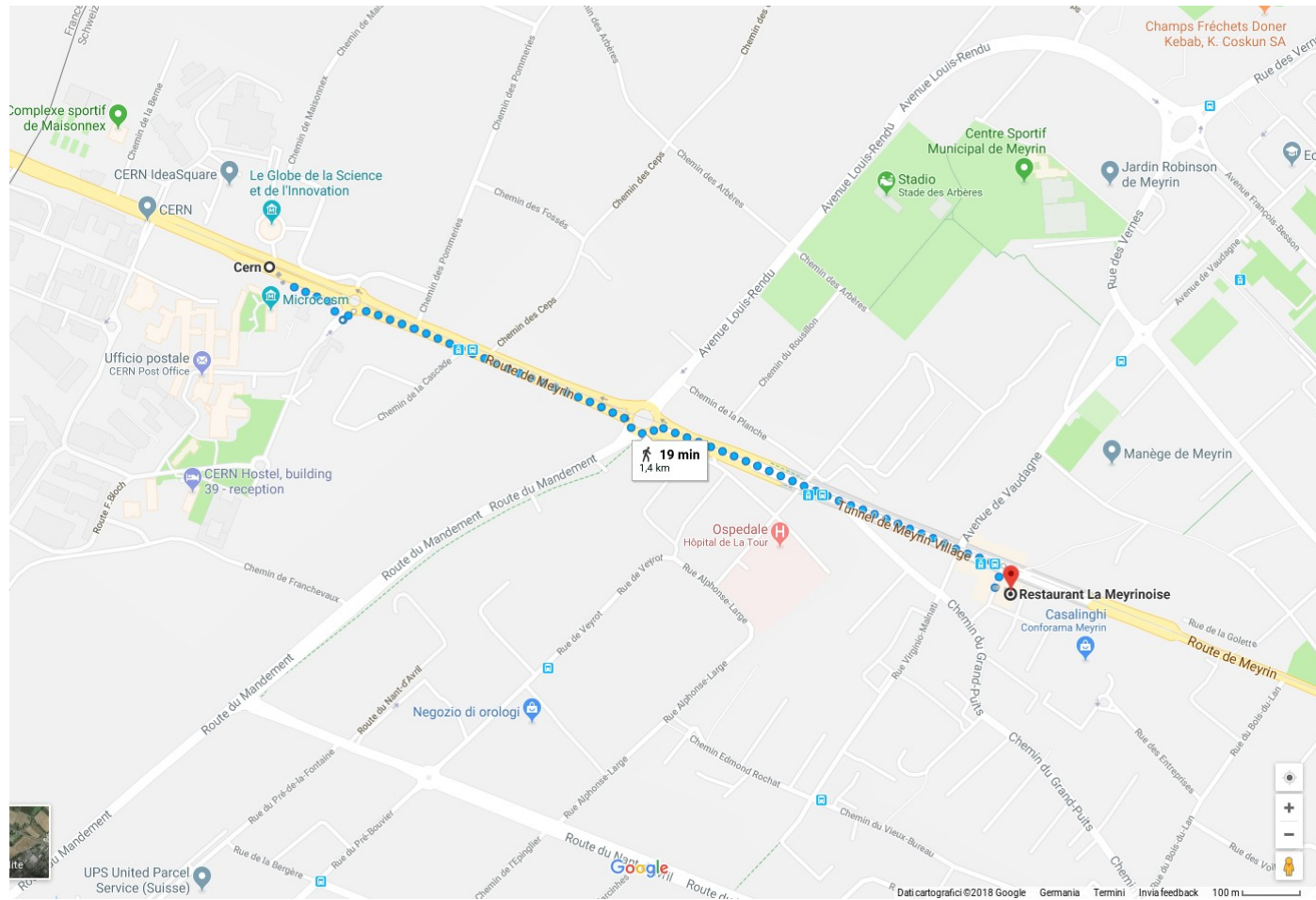
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→ Tradition also includes the workshop dinner :)

Dinner: 23rd January 2018

PLACE: RESTAURANT LA MEYRINOISE, 19.30h
(1.4 km from CERN entrance on foot, or two tram stops from CERN)
https://doodle.com/poll/4gg4wfk4z7tcu9pb (please fill in, if not yet done)
If you want, we can meet at 19h in Restaurant 1 and go together

Agenda

First part – morning: pQCD and resummation
(until 12.30 in Salle Bohr)

Lunch at 13.00-14.30h

Second part – afternoon: machine learning
techniques for jet physics
(until 18.30 in room 42-3-032)

Note the different room!

Tutorial on Katie + Cascade at 17.55h

Dinner at 19.30h

Time	Session	Speaker	
09:00	**Introduction** 40-S2-B01 - Salle Bohr, CERN	Mikko Voutilainen et al. 09:00 - 09:10	
	Threshold and jet radius joint resummation for single-inclusive jet production 40-S2-B01 - Salle Bohr, CERN	S. Moch 09:10 - 09:35	
	Results on NNLO fits with jet data 40-S2-B01 - Salle Bohr, CERN	Dr. Juan Rojo 09:35 - 10:00	
10:00	**Towards a NLO parton shower** 40-S2-B01 - Salle Bohr, CERN	Stefan Hoeche 10:00 - 10:25	
	TMD distribtuions and jet physics predictions 40-S2-B01 - Salle Bohr, CERN	Krzysztof Kutak 10:25 - 10:50	
11:00			
	Determination of TMDs from jet physics 40-S2-B01 - Salle Bohr, CERN	Wouter Waalewijn 11:20 - 11:45	
12:00	**The parton branching method** 40-S2-B01 - Salle Bohr, CERN	Francesco Hautmann 11:45 - 12:10	
	Progress on NNLOjet calculations 40-S2-B01 - Salle Bohr, CERN	Dr. Alexander Huss 12:10 - 12:35	
	Status and possibilities of interpolation grids (fastNLO) 40-S2-B01 - Salle Bohr, CERN	Klaus Rabbertz 12:35 - 13:00	
13:00			
14:00			
	Machine learning techniques for unfolding 42-3-032, CERN	Alexander Glazov 14:30 - 14:55	
15:00	**Machine Learning for Jet Physics** 42-3-032, CERN	Ben Nachman 14:55 - 15:20	
	Deep neural network for boosted top tagging 42-3-032, CERN	Wojtek Fedorko 15:20 - 15:45	
	Adversarial neural networks for jet images 42-3-032, CERN	Luke Percival De Oliveira 15:45 - 16:10	
16:00			
	Jet classification with neural networks 42-3-032, CERN	Andrew Larkoski 16:40 - 17:05	
17:00	**Jet substructure classification with neural networks** 42-3-032, CERN	Daniel Whiteson 17:05 - 17:30	
	Jets in Herwig and new ideas on jet tagging 42-3-032, CERN	Radek Podskubka 17:30 - 17:55	
18:00	**Tutorial on KaTie + CASCADE** 42-3-032, CERN	Andreas van Hameren et al. 17:55 - 18:30	

Thank you very much for coming and participating!