

## CMS Trigger Workshop, Belgrade, 11-14 December 2017

11 Dec 2017, 13:00 → 14 Dec 2017, 20:30 Europe/Belgrade

tba (Vinca Institute of Nuclear Sciences - University of Belgrade)



Alex Tapper (Imperial College (GB)) , Alexandre Zabi (Centre National de la Recherche Scientifique (FR)) ,  
Andrew Brinkerhoff (University of Florida (US)) , Emmanuel Francois Perez (CERN) , Marco Pieri (Univ. of California San Diego (US)) ,  
Milos Dordevic (Vinca Institute, University of Belgrade) , Simone Gennai (Universita & INFN, Milano-Bicocca (IT)) ,  
Vladimir Rekovic (University of Wisconsin Madison (US))



Description

### CMS Trigger Workshop, Belgrade, 11-14 December 2017

The aim of this workshop is to review the 2017 Level-1 and High Level Trigger performance and organize and prepare the 2018 running period. The trigger menus have been completely revisited this year to fulfill the CMS physics programme. The selection schemes have grown in complexity and developments were achieved with the collaboration of the PAGs and POGs. These menus have been tested in the harsh 2017 LHC running conditions with ever increasing PU requiring constant adjustments and tuning. The workshop should address the lessons learned from this year's running and propose improvements to the workflow in order to face even more difficult conditions next year. The case of lumi-levelling should be discussed along with other aspects of menu validation and rate extrapolation with PU. The strategy to prepare the menus in 2018, including the sharing of rate between the different analysis, the HLT output rate optimization as function of luminosity and the interplay between standard trigger paths and scouting and parking, should be determined and agreed upon.

The workshop sessions will be held at the University of Belgrade, in the very center of the city, from Monday 11.Dec (afternoon session) to Thursday 14.Dec.

Monday evening - Reception (Cruising the Danube and Sava rivers)

Tuesday evening - Cultural Event (concert of classical music)

Wednesday evening - Dinner

Thursday afternoon/evening - Excursion

Thursday afternoon/evening - excursion

## Hotels:

The Hotel Palace in Belgrade, that is in the close proximity (500m walk) to the Solemn Hall of the Rectorate of the Belgrade University has a pre-reservation of single and double rooms for the participants of the Workshop, with the prices of 49 EUR (for single) and 68 EUR (for double) including breakfast and taxes. We would like to encourage the participants to register by sending e-mail to:

[office@palacehotel.rs](mailto:office@palacehotel.rs)

indicating also the code "CMS Trigger Workshop". Here is the hotel website:

<http://www.palacehotel.co.rs/en>



Alternatively, below is a short list of a few other hotels in the city center:

<http://www.hotelmoskva.rs/en/>

<http://www.squarenine.rs/english/>

<http://www.metropolpalace.com>

[http://www.hotelkasina.rs/index\\_en.html](http://www.hotelkasina.rs/index_en.html)

## Flights

### Direct

During December there are direct (Easyjet) flights between GVA to BEG on Mondays, Wednesdays and Fridays e.g.:

Mon GVA departs 6:30

Wed GVA departs 9:10

Wed BEG departs 11:45

Fri BEG departs 9:05

Mon BEG departs 9:05

Costs approx CHF100 but might become more pricey as the time of departure approaches.

### Non-direct



[Flight services](#)

There are as well non directing flights from Geneva to Belgrade with SWISS, Austrian, Lufthansa, AirSerbia

E.g. with SWISS

Mon depart GVA 10:00, arrive BEG 14:00

Fri depart BEG 14:40, arrive GVA 18:35

Belgrade airport is approx. 15 minutes from Belgrade center, depending on traffic.

Taxis cost about 15 EURO (1,800 Serbian Dinars). Take a taxi receipt at the information desk which contains the name of your destination and appropriate price for the taxi service. (more info at <http://www.beg.aero/en/strana/8871/from-belgrade-airport>)

## Reception

Cruising the Danube and Sava rivers, including aperitif drinks (11th December).

<http://klubkej.com/portfolio-item/krstarenja/>



## Cultural event

The concert of classical music, Tuesday, 12th December (TBA).

## Workshop Dinner


The workshop dinner is reserved for Wednesday, 13th of December, in the classical restaurant of Aeroclub in Belgrade, next to the Rectorate Building.



































Dinner is based on full course menu, with aperitif drinks and coffees included.

<http://restoranaeroklub.rs/>





**Registration**  You have registered for this event.

- Participants**
-  Aaron Bundock
  -  Alexander Tapper
  -  Alexandre Zabi
  -  Amina Zghiche
  -  Andrea Bocci
  -  Andrew Brinkerhoff
  -  Benjamin Radburn-Smith
  -  Chiara Amendola
  -  Cristina Martin Perez
  -  Damir Devetak
  -  David Petyt
  -  Dinyar Rabaday
  -  Emmanuel Francois Perez
  -  Gabriella Pasztor
  -  Georgia Karapostoli
  -  Georgios Karathanasis
  -  Giovanni Franzoni
  -  James Joseph Buchanan
  -  Jovan Milosevic
  -  Laslo Nadder
  -  Libo Cheng
  -  Manfred Jeitler
  -  Marco Pieri
  -  Matteo Defranchis
  -  Matthias Komm
  -  Milan Stojanovic
  -  Milos Dordevic
  -  Nadir Daci
  -  Olivier Davignon
  -  Pantelis Kontaxakis
  -  Peter Major
  -  Praveen Chandra Tiwari
  -  Predrag Cirkovic
  -  Samuel Baxter

## MONDAY, 11 DECEMBER

<b>13:00</b>	→ 14:00	<b>Registration</b>	
<b>14:00</b>	→ 15:40	<b>Session 1: Introduction and overview</b> <b>Conveners:</b> Alex Tapper (Imperial College (GB)), Emmanuel Francois Perez (CERN), Marco Pieri (Univ. of California San Diego (US)), Simone Gennai (Universita & INFN, Milano-Bicocca (IT))	📍 tba
14:00		<b>Introduction (welcome to Belgrade)</b> ⌚ 10m	
14:10		<b>Report from Run Coordination</b> ⌚ 45m	
14:55		<b>Report from Physics Coordination</b> ⌚ 45m	
<b>15:40</b>	→ 16:00	<b>Coffee break</b> ⌚ 20m	📍 tba
<b>16:00</b>	→ 17:30	<b>Session 2: Detector reports</b> <b>Conveners:</b> Alexandre Zabi (Centre National de la Recherche Scientifique (FR)), Andrew Brinkerhoff (University of Florida (US))	📍 tba
16:00		<b>Report from HCAL</b> ⌚ 30m	
16:30		<b>Report from ECAL</b> ⌚ 30m	
17:00		<b>Impact of detector calibrations for Jets and MET for L1 and HLT</b> ⌚ 30m	
<b>20:00</b>	→ 21:30	<b>Reception - Danube cruise</b>	

## TUESDAY, 12 DECEMBER

### 09:00 → 11:00 Session 3: Level-1 topics

**Conveners:** Alexandre Zabi (Centre National de la Recherche Scientifique (FR)), Andrew Brinkerhoff (University of Florida (US))

09:00 **Review of Egamma** ⌚ 30m

09:30 **Review of Taus** ⌚ 30m

10:00 **Review of Jet/MET** ⌚ 30m

10:30 **Review of Muons** ⌚ 30m

### 11:00 → 11:30 Coffee break ⌚ 30m

### 11:30 → 13:20 Session 4: Level-1 Offline

**Conveners:** Michael J Mulhearn (University of California Davis (US)), Vladimir Rekovic (University of Wisconsin Madison (US))

11:30 **Emulator overview & workflows** ⌚ 20m

11:50 **O2O** ⌚ 20m

12:10 **Future: Muons, Calorimeter** ⌚ 20m

12:30 **Future: GT** ⌚ 20m

12:50 **Emulator in DQM/validation** ⌚ 30m

### 14:30 → 16:00 Session 5: L1 and HLT Calibrations

**Conveners:** Marco Pieri (Univ. of California San Diego (US)), Simone Gennai (Universita & INFN, Milano-Bicocca (IT))

14:30 **Level-1 Calibrations report** ⌚ 30m

15:10 **ALCA Report** ⌚ 30m

Includes possible further optimization of ALCA triggers (rates, output, ...) and validation of condition updates

### 16:00 → 16:30 Coffee break ⌚ 30m

### 16:30 → 18:00 Session: Physics Objects (Tracking Muon, Jet/MET)

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**16:30** → **18:00** **Session: Physics Objects (Tracking, Muon, JetMET)** 📍 tba

**Conveners:** Marco Pieri (Univ. of California San Diego (US)), Simone Gennai (Universita & INFN, Milano-Bicocca (IT))

- 16:30** | **Tracking and pixel mitigation** ⌚ 30m
- 17:00** | **Muon Reconstruction** ⌚ 30m  
**Speaker:** Benjamin Radburn-Smith (Seoul National University (KR))
- 17:30** | **Jet/MET trigger needs and future developments for calibrations** ⌚ 30m

**20:00** → **21:00** **Concert of classical music**

### WEDNESDAY, 13 DECEMBER

**09:00** → **10:30** **Session: PAG/POG session 1 (L1+HLT)** 📍 tba

**Conveners:** Alexandre Zabi (Centre National de la Recherche Scientifique (FR)), Andrew Brinkerhoff (University of Florida (US))

- 09:00** | **Higgs/EGamma/Tau** ⌚ 30m  
**Speaker:** Olivier Davignon (University of Bristol (GB))
- 09:30** | **Top/BTag** ⌚ 30m
- 10:00** | **SMP/Muons/EGamma** ⌚ 30m  
**Speaker:** Gabriella Pasztor (Eötvös University, Budapest)

**10:30** → **11:00** **Coffee break** ⌚ 30m 📍 tba

**11:00** → **12:30** **Session: PAG/POG session 2 (L1+HLT)** 📍 tba

**Conveners:** Marco Pieri (Univ. of California San Diego (US)), Simone Gennai (Universita & INFN, Milano-Bicocca (IT))

- 11:00** | **Report from SUSY** ⌚ 20m
- 11:20** | **Report from EXO** ⌚ 20m
- 11:40** | **Report from B2G** ⌚ 20m
- 12:00** | **BPH future strategy** ⌚ 15m
- 12:15** | **Scouting and Parking** ⌚ 15m

**14:00** → **15:30** **Session: Computing/DAQ and PPD** 📍 tba

**Conveners:** Marco Pieri (Univ. of California San Diego (US)), Vladimir Rekovic (University of Wisconsin Madison (US))

- 14:00** | **Computing: Requirements and limits** ⌚ 45m

	14:45	<b>PPD and Offline Coordination</b>	🕒 45m	
15:30	→ 16:00	<b>Coffee break</b>	🕒 30m	📍 tba
16:00	→ 17:30	<b>Session: on HLT STEAM group</b> <b>Conveners:</b> Marco Pieri (Univ. of California San Diego (US)), Simone Gennai (Universita & INFN, Milano-Bicocca (IT))		📍 tba
	16:00	<b>Public results</b>	🕒 30m	
	16:30	<b>Validation of menus</b>	🕒 30m	
	17:00	<b>DQM improvements and future strategy</b>	🕒 30m	
20:00	→ 22:00	<b>Workshop dinner</b>		

### THURSDAY, 14 DECEMBER

09:00	→ 10:30	<b>Session: Open questions / Menu optimization</b> <b>Conveners:</b> Alex Tapper (Imperial College (GB)), Emmanuel Francois Perez (CERN)		📍 tba
	09:00	<b>Menu optimization in 2018, open questions</b>	🕒 1h 30m	
10:30	→ 11:00	<b>Coffee break</b>	🕒 30m	📍 tba
11:00	→ 12:30	<b>Session: HLT Future 2021</b> <b>Conveners:</b> Marco Pieri (Univ. of California San Diego (US)), Simone Gennai (Universita & INFN, Milano-Bicocca (IT))		📍 tba
	11:00	<b>Future: Path to the HLT TDR (2021) and needs</b>	🕒 1h 30m	
19:00	→ 20:30	<b>Nikola Tesla Museum visit</b>		📍 tba