

## Session Program

9-13 Sept 2024



## 2024 ATLAS-CMS Flavour Tagging Workshop

*Plenary*

# Monday 9 September

08:20

## Plenary: Algorithms in ATLAS and CMS: resolved and boosted

**Session** | **Location:** Grand Hotel Savoia, Via Arsenale Di Terra 5, Genoa, 16126, Italy | **Conveners:** Alexandre De Moor, Samuel Van Stroud, Nicole Michelle Hartman, Ming-Yan Lee

### 09:00–09:30 Welcome and introduction

**Speaker**

Francesco Armando Di Bello

### 09:30–09:55 Flavour Tagging in ATLAS and CMS: an overview

**Speaker**

Fabrizio Parodi

### 09:55–10:15 Tracking and vertexing in ATLAS

**Speaker**

Jackson Carl Burzynski

### 10:15–10:35 Tracking and vertexing in CMS

**Speaker**

Dr Marco Musich

### 10:35–10:50 Tracking and vertexing - discussion

### 11:00–11:30 Coffee break

### 11:30–11:50 FTAG algorithms in ATLAS

**Speaker**

Philipp Gadov

### 11:50–12:10 FTAG algorithms in CMS

**Speaker**

Alexandre De Moor

### 12:10–12:25 Algorithms - discussion

### 12:25–12:45 Boosted bb/cc tagging in ATLAS

**Speaker**

Jackson Barr

### 12:45–13:05 Boosted bb/cc tagging in CMS

**Speaker**

Raffaele Angelo Gerosa

### 13:05–13:20 Boosted bb/cc tagging - discussion

### 13:20–13:40 Boosted top/W/Z tagging in CMS

14:00

**Speaker**  
Fabio Lemmi

# Tuesday 10 September

09:00

## Plenary: Calibrations in ATLAS and CMS: resolved and boosted

**Session** | **Location:** Grand Hotel Savoia, Via Arsenale Di Terra 5, Genoa, 16126, Italy | **Conveners:** Svenja Diekmann, Valentina Vecchio, Brian Moser, Jan van der Linden

09:00–09:15 **b-jet calibration in ATLAS**

**Speaker**  
Zhibo Wu

09:15–09:30 **b-jet calibration in CMS**

**Speaker**  
Gouranga Kole

09:30–09:45 **b-jet calibration - discussion**

09:45–10:00 **Light- and c-jet calibration in CMS**

**Speaker**  
Agostino De Iorio

10:00–10:10 **c-jet calibration in ATLAS**

**Speaker**  
Andrew Mehta

10:10–10:20 **Light-jet calibration in ATLAS**

**Speaker**  
Martino Tanasini

10:20–10:43 **Light- and c-jet calibration - discussion**

10:43–10:58 **Continuous calibration in ATLAS**

**Speaker**  
Malte Algren

10:58–11:18 **Coffee break**

11:18–11:33 **Continuous calibration in CMS**

**Speaker**  
Svenja Diekmann

11:33–12:01 **Continuous calibration - discussion**

12:01–12:16 **Boosted bb/cc calibration in ATLAS**

**Speaker**  
Daariimaa Battulga

12:16–12:31 **Boosted bb/cc calibration in CMS**

**Speaker**  
Matteo Marchegiani

12:31-12:41 **Boosted bb/cc calibration - discussion**

12:41-12:56 **Smoothing, MC/MC, eigenvectors in ATLAS**

**Speaker**  
Tom Dingley

12:56-13:11 **Smoothing, combination and extrapolation of b-tagging SFs in CMS**

**Speaker**  
Luca Scodellaro

13:11-13:26 **Smoothing, etc - discussion**

13:31

# Wednesday 11 September

09:00

## Plenary: Invited talks: machine learning, modelling (theory), flash talk (open submission)

**Session** | **Location:** Grand Hotel Savoia, Via Arsenale Di Terra 5, Genoa, 16126, Italy | **Conveners:** Carlo Schiavi, Andrea Coccaro

09:00–09:20 **Machine learning for flavour tagging - overview and future prospects**

**Speaker**

Huilin Qu

09:20–09:40 **Theory talk on b- and c-jets labelling**

**Speaker**

Prof. Simone Marzani

09:40–10:00 **flavor-tagging at LHCb**

**Speaker**

Quentin Fühling

10:00–10:20 **b-tagging at FCC**

**Speaker**

Dr Andrea Sciandra

10:20–10:40 **Measuring and modelling fragmentation functions at LHC**

**Speaker**

Miha Muskinja

10:40–11:00 **FTAG usage in physics analyses: an overview in ATLAS and CMS**

**Speaker**

Giacinto Piacquadio

11:00–11:30 **Coffee break**

11:30–11:45 **flash talk: Maskformer for Vertex Reconstruction**

**Speakers**

Nikita Ivvan Pond, Samuel Van Stroud

11:45–12:00

**flash talk: Investigating the impact of 4D Tracking in ATLAS Beyond Run 4**

**Speaker**

Lorenzo Santi

12:00–12:15

**flash talk: Finetuning foundation models for joint analysis optimization**

**Speaker**

Matthias Vigil

12:15–12:30 **Big Data Democracy**

13:00

**Speaker**  
Claudio Muselli

# Thursday 12 September

09:00

## Plenary: b-jet triggers and FTAG software

**Session** | **Location:** Grand Hotel Savoia, Via Arsenale Di Terra 5, Genoa, 16126, Italy | **Conveners:** Bo Liu, BinBin Dong, Jieun Choi, Liaoshan Shi, Ming-Yan Lee

09:00–09:20 **b-jet triggers in ATLAS**

**Speaker**

Stefano Franchellucci

09:20–09:40 **b-jet triggers in CMS**

**Speaker**

Jieun Choi

09:40–10:00 **Parking Trigger Strategy in CMS**

**Speaker**

Marko Stamenkovic

10:00–10:20 **Object tagging and machine learning at the CMS L1 Trigger**

**Speaker**

Sioni Paris Summers

10:20–10:35 **Trigger - discussion**

10:35–10:55

**Flavor Tagging Efficiency Parametrisations with Graph Neural Networks in ATLAS**

**Speaker**

Martino Tanasini

11:00–11:30 **Coffee Break**

11:30–11:45 **FTAG ML Pipeline in ATLAS**

**Speaker**

Dmitrii Kobylanskii

11:45–12:00 **FTAG ML Pipeline & training framework in CMS**

**Speaker**

Alexander Jung

12:00–12:15 **ML Pipeline - discussion**

12:15–12:30 **FTAG from Recommendation to User in ATLAS**

**Speaker**

Zhuoran Feng

12:30–12:45 **FTAG from Recommendation to User in CMS**

**Speaker**

Jan van der Linden

13:00

12:45-13:00

**Recommendation - discussion**

# Friday 13 September

09:00

## Plenary: Summary and close-out

**Session** | **Location:** Grand Hotel Savoia, Via Arsenale Di Terra 5, Genoa, 16126, Italy

09:00–09:20 **Tau identification in CMS**

**Speaker**

Paola Mastrapasqua

09:25–09:45 **Tau identification in ATLAS**

**Speaker**

Michaela Mlynarikova

09:50–10:10 **Coffee break**

10:10–10:35 **ATLAS Summary**

**Speaker**

Spandan Mondal

10:35–11:00 **CMS Summary**

**Speaker**

Francesco Armando Di Bello

11:00–11:30 **Outlook: Open questions and future of FTAG**

**Speaker**

Carlo Schiavi

11:30–11:40 **Closing**

13:00