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# Implications of LHCb measurements and future prospects

11<sup>th</sup> edition

19-22 October 2021

Joint LHCb-Theory workshop

# Sheldon Stone 1946-2021



Sheldon was a true all round physicist, having made major contributions to data analysis, detector construction and phenomenology. He was co-spokesperson of both the CLEO and BTeV Collaborations. He was LHCb Upgrade Coordinator 2008-2011, and a driving force behind the Upstream Tracker.

He had a profound impact on the LHCb physics programme and was a lead proponent of a large number of LHCb Physics papers.

He was a constant innovator and inspiration to all those who knew him. We will greatly miss him.

Our deepest condolences to his wife Marina Artuso, & family.



Words prepared by Chris Parkes, LHCb Spokesperson.

# Welcome

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Purpose of the meeting is to

- consider the **latest results** from LHCb
- discuss **possible interpretations** and
- **identify important channels** and observables to test leading theoretical frameworks in the near and longer term **future** of the LHCb data taking

# Programme

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- <https://indico.cern.ch/event/1055778/timetable/>

Tue 19 Oct	Wed 20 Oct	Thu 21 Oct	Fri 22 Oct
CERN EP Seminar	Flavour	More RD+SLB (everyone welcome)	2. CPV + mix
1. Spectroscopy	Anomaly	3. Heavy Ion + high-pt	Keynote <b>A.Buras</b> (everyone welcome)
	Workshop		

- Opening:
  - Tue 19 Oct 13:00      LHCb Overview:      Giovanni Cavallero
- Closing:
  - Fri 22 Oct 14:00      Flavour Physics Overview:      Andrzej Buras
  - Zoom: <https://cern.zoom.us/j/64695333704?pwd=aXZzelA3aTZrcWdMcDRtb2N0TG12UT09>

# Organization

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## Scientific programme shaped by the Stream conveners :

- 1. QCD spectroscopy and exotic hadrons
  - Sasa Prelovsek, Meng-Lin Du (Theory)
  - Mengzhen Wang , Lorenzo Capriotti (LHCb)
- 2. Mixing and CP violation in charm and beauty
  - Maria Laura Piscopo, Jason Aebischer (Theory)
  - Peilian Li, Adam Davis (LHCb)
- 3. High- $p_T$  SM and Heavy Ion physics
  - Andrii Usachov, Benjamin Audurier (LHCb),

## This year the organising committee includes :

- Alexander Lenz, Chris Parkes, Danny van Dyk, Guy Wilkinson, Jure Zupan, Marco Pappagallo, Matthew John Charles, Monica Pepe-Altarelli, Niels Tuning, Svetlana Fajfer, Yasmine Amhis

# Logistics

- Implications (Main Auditorium)

- 70 pers. max.
- No sanitary pass needed
- First-come-first-serve

	Implications	Flavour Anomaly
Total	<b>204</b>	579
In person	<b>84</b>	121

- Flavour Anomaly Workshop (Main Auditorium)

- 200 pers. max.
- Retrieve badge on **Wednesday 8:30**
- Show EU/Swiss sanitary pass
- First-come-first-serve

WEDNESDAY, 20 OCTOBER



08:30 → 09:45 **Registration: collect badge (with sanitary pass)**

🕒 1h 15m

09:45 → 17:45 **Anomaly Workshop 2021**



Agenda

# Zoom rooms and discussion

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- Two zoom rooms in parallel:
  - Workshop / presentations: [64695333704](https://cern.zoom.us/j/64695333704)
    - <https://cern.zoom.us/j/64695333704?pwd=aXZzelA3aTZrcWdMcDRtb2N0TGI2UT09>
  - Discussions / coffee: [69069265933](https://cern.zoom.us/j/69069265933)
    - <https://cern.zoom.us/j/69069265933?pwd=Yno4NG50aytxY25FeVNGbHBPeWhJZz09>
- Both rooms are open throughout workshop
- **Discussion** / coffee zoom room:
  - For discussions after/between the talks
  - Can also be used during talks, for informal chats
  - We encourage all of you to be as informal as possible in the discussions that will take place 😊
- **Presentation**: please switch **camera on** for a personal 'feel'
- **Questions**: please use "raise-hand" feature in zoom