

# Eduardo Rodrigues

**Name:** Eduardo Rodrigues      **Place of Birth:** Lisbon, Portugal  
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## **HIGHLIGHTS from CURRENT ACTIVITIES and LEADERSHIP ROLES**

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- LHCb Collaboration Data Processing & Analysis Project Leader, since Autumn 2020
- Founder and chair of organising committee of series of workshops PyHEP, "Python in HEP", since 2018
- Initiator and co-convener of the HEP Software Foundation's (HSF) PyHEP Working Group, since 2018
- Founder and leader of Scikit-HEP project (Python ecosystem for Particle Physics), since late 2016
- Co-convener of UK's SWIFT-HEP C&SW project Data Analysis Working Group, since 2021
- Editorial Board member or reviewer for several physics and software related journals

## **CURRENT and RECENT EMPLOYMENTS**

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- 01/2020 – present      Senior Research Physicist with the University of Liverpool, U.K. Core position. Participation in the LHCb experiment.
- 02/2016 – 12/2019      Research Scientist with the University of Cincinnati, U. S. A. Participation in the LHCb experiment and the NSF-funded software project DIANA/HEP (Data-Intensive ANalysis for High Energy Physics). Cincinnati LHCb deputy Group Leader.

## **AWARDS, INTERNATIONAL RECOGNITION, ELECTED POSITIONS**

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- 12/2017 – present      High Energy Physics Software Foundation (HSF) Coordination Team member  
2015 – 2017      Visiting scientist, National Center for Theoretical Sciences (NCTS),  
National Tsing Hua University (NTHU), Hsinchu, Taiwan

### **Journals and LHCb Review Committees**

- Editorial Board Member and reviewer: *Nature Scientific Reports, Big Data and AI in High Energy Physics (specialty section of Frontiers in Big Data)*
- Reviewer: *Computing and Software for Big Science (CSBS), SoftwareX, Progress of Theoretical and Experimental Physics (PTEP)*
- On LHCb analysis review committees since 2011
- Reviewer of (virtual) *CHEP 2021 International Conference* proceedings

### **Editing Roles (recent)**

- 2021      Editor and author of *LHCC HL-LHC Computing Review Stage-2: Common Software Projects - Data Science Tools*, under preparation
- 11/2017 – 03/2019      Editorial Board member, HSF Community White Paper *A Roadmap for HEP Software and Computing R&D for the 2020s*, HSF-CWP-2017-01, arXiv:1712.06982 [physics.comp-ph]

### **Conference Committees (recent)**

- 2021      Programme Committee member for (virtual) *CHEP 2021 – 25<sup>th</sup> International Conference on Computing in High-Energy and Nuclear Physics*
- 2018 – present      Founder and chair of organising committee of workshop series PyHEP – "Python in HEP".
- 03/2019      Co-convener of HSF's PyHEP WG session at the 2019 Joint HSF/OSG/WLCG Workshop "HOW 2019", Jefferson Laboratory, Newport News, Virginia, US
- 03/2018      Co-convener session "Analysis facilities and use cases", WLCG-HSF Workshop, Naples, Italy

### **Invited Scientific Lectures (recent)**

- 06/2021      ESCAPE Summer School 2021, Data Science for Astronomy, Astroparticle and Particle Physics (online event)
- 10/2020      STFC School on Data Intensive Science 2020, "LIV.DAT 2020" (online event)

### **PhD examinations (recent)**

- 2018, 2021      External examiner: EPF, Lausanne; University of Milan Bicocca

## **SUMMARY of PUBLICATIONS, SEMINARS and TALKS**

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Over 700 publications including peer-reviewed articles, conference proceedings and reports.

Over 70 conference and workshop presentations, and seminars.

Over 200 talks, in particular at various LHCb meetings related to physics, software and computing, tracking, trigger and reconstruction. A full list can be found at [cern.ch/eduardo.rodrigues/talks.html](http://cern.ch/eduardo.rodrigues/talks.html).

- In the LHCb experiment authors list since mid 2002: close to 600 physics publications, of order 30 physics-related and technical reports, 10 conference notes.  
Full list of LHCb physics publications from [INSPIRE](#). Of the published papers, 7 have 500+ citations.
- 5 publications on Flavour Physics phenomenology and 3 review articles.
- Several publications on computing & software in Particle Physics.
- In the ZEUS authors list for the period 10/1999 - 08/2003: 49 publications.

### **Highlight recent talks**

- *LHCb input*, HSF HL-LHC Analysis Mini-Workshop, virtual event, 4 May 2021
- *PyHEP WG activities and the PyHEP 2020 workshop*, HSF WLCG Virtual Workshop, virtual event, 19 - 24 November 2020
- *b-baryon decays*, FPCP 2020 – 18<sup>th</sup> Conference on Flavor Physics and CP Violation, Illa Da Toxa, (Spain) - virtual event, 8-12 June 2020
- *The Scikit-HEP project - overview and prospects*, CHEP 2019 – 24<sup>th</sup> International Conference on Computing in High Energy and Nuclear Physics, Adelaide Convention Centre, Adelaide (Australia), 4 - 8 November 2019
- *Analysis software and workflows in LHCb*, Belle II Software Workshop, Garching, 1 - 5 July 2019
- *The Scikit-HEP project*, CHEP 2018, Sofia, 9 - 13 July 2018
- *HSF Community White Paper - review & outlook*, Joint WLCG & HSF Workshop 2018, Naples, 26 - 29 March 2018
- *Charmless B decays at LHCb*, EPS-HEP 2017, Venice, 5 - 12 July 2017

## **SOFTWARE PROJECTS**

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| 10/2016 – present | Founder and leader of Scikit-HEP project, a community-driven and community-oriented Python toolset for Particle Physics. Project officially supports ATLAS, Belle-II, CMS, KM3NeT and LHCb. |
| 05/2017 – 08/2017 | Google Summer of Code (GSoc) 2017 programme. Mentor for the CERN-HSF organisation, with one project approved.   |

## **LEADERSHIP POSITIONS – LHCb EXPERIMENT**

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|---------------------|---|
| 09/2020 – present   | Project Leader of Data Processing & Analysis project (offline)  |
| 10/2014 – 12/2019   | Coordinator of the offline Physics Analysis software group  |
| 2012 – 2016         | Roles of Convener of Physics Working Group on Charmless b-hadron Decays, Co-convener of 2-body charmless B decays and of B2OpenCharm time-dependent Physics Analysis Groups |
| 2008 – 2014         | Various roles in Vertex Detector project: Deputy Project Leader, Software Coordinator, Data Quality Coordinator   |
| 2014 – 2016, 2020 – | Physics Planning Group member   |
| 09/2020 – present   | Member of Operations Planning Group, Physics Planning Group, Upgrade Software Planning Group  |
| 2012 – 2014, 2020 – | Technical Board member  |

## **CONTRIBUTIONS to WORKSHOPS and CONFERENCES**

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| 1999 – present | Over 40 participations. Plenary and parallel invited talks on a broad set of topics. Conferences include Beauty, CHEP, CKM, DISCRETE, EPS-HEP, FPCP, HERA and the LHC, HSF/WLCG, ICATPP, IoP, Moriond, PASCOS, PyHEP, Vertex. Full list at <a href="http://cern.ch/eduardo.rodrigues/talks.html#presentations">cern.ch/eduardo.rodrigues/talks.html#presentations</a> . |
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## **RECENT GRANT APPLICATIONS**

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| 2018 – present | Sponsorships for the PyHEP workshops from the Python Software Foundation (PSF), IRIS-HEP, Fermilab, Nikhef, Software Sustainability Institute (SSI), University of Liverpool |
| 2021           | Researcher Co-investigator on the Liverpool University 5-year Consolidated Grant Proposal  |