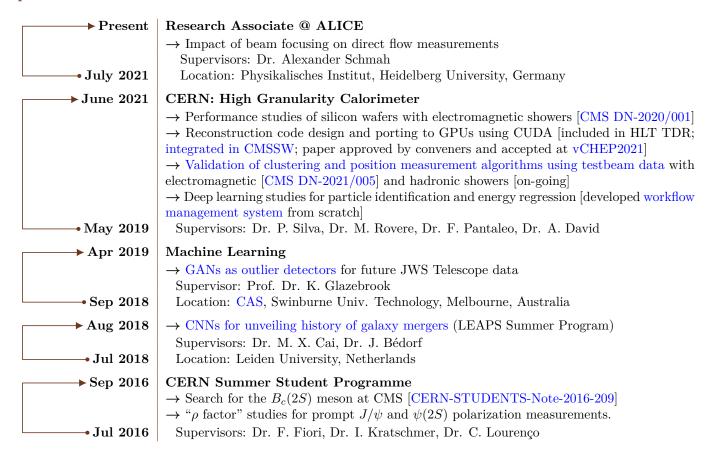
# Curriculum Vitæ

Name: Bruno Alves

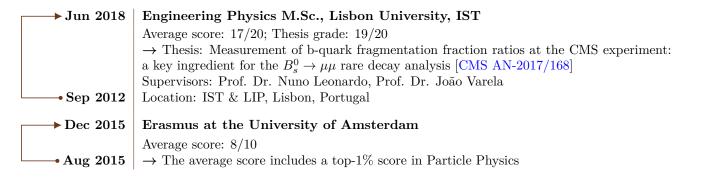
GitHub: https://github.com/b-fontana

E-mail: bruno.alves@cern.ch

## Experience



#### Education



# Paper

2021 | 25th International Conference on Computing in High-Energy and Nuclear Physics (vCHEP2021)

 $\rightarrow$  Alves B. et al. (in press). Heterogeneous techniques for rescaling energy deposits in the CMS Phase-2 endcap calorimeter. *EPJ Web of Conferences*.

#### Schools & Presentations

## Grants & Awards

2021	PhD grant (LLR, Paris, 3 years)  → The prestigious Bourse Monge from École Polytechnique was additionally awarded.	
2018	Machine Learning grant (CAS, Melbourne, 7 months)	
	Machine Learning Summer School grant (Leiden Univ., 2 months)  → Around 60 candidates per project	
2017	M.Sc. grant (Lisbon Univ., 6 months)	
2016	Winner: LIP Técnico Particle Challenge (LIP, Lisbon, 6 months grant)  → Written questions + Oral presentation	

→ Computer architecture and efficient programming

### Skills

Computing	<ul> <li>Scientific packages: numpy, scipy, pandas, h5py, (conda),</li> <li>Visualization: bokeh (+ custom wrapper), matplotlib</li> <li>Machine learning: tensorflow, keras, scikit-learn</li> <li>GPU computing: CUDA (plus advanced memory management in C++)</li> <li>Code versioning and contributions: git</li> <li>Code workflow management: luigi</li> <li>Automated job submission to computer clusters</li> </ul>
	• CERN specific: CMS-SW, ROOT and tools from scikit-hep
Languages	Portuguese/Italian (native), English (fluent), German (intermediate)
Communication	Excellent communication skills developed thanks to frequent meetings at CERN, talks given in multiple countries and languages, poster presentations and presentations for schools.
Supervision	• CERN Summer Student 2020 co-supervisor (Danilo Petricevic): search for rare $W \to \pi \gamma$ and $W \to \pi \pi \pi$ in top events [CERN-STUDENTS-Note-2020-014] • Two students working on HGCAL GPU-related efforts: Si Tong An, Abhishek Das
Hobbies	Yoga, mandarin, chess
Other	Tutor experience as a Red Cross volunteer