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UM6P

Brief Curriculum Vitae

Dr. TNOURJI Abdellah

Maître de Conférences, CNU Section 29

29 years old / Married / French-Moroccan Nationality

Research Professor at ELISA Aerospace, Saint-Quentin, France.

Ph.D. in Particle Physics defended on November 4, 2022 at LPC Clermont-Ferrand, France: *Time calibration of the High Granularity Timing Detector and measurement of top quarks spin correlation with the ATLAS detector.*

Research Fields: Data Analysis - Artificial Intelligence - Physics.

Keywords: Statistical Analysis, Physics, Data Analysis, Hardware-Software Integration, Artificial Intelligence, Python/C++, Scientific Computing, MC Simulation.

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Curriculum Vitae

1.1. Research Experience

Oct 2022	Professor of Data Analysis and Artificial Intelligence, ELISA Aerospace, Saint-Quentin. School of Aerospace and Defense Engineering. October 2024: Promoted to the position of Research Professor.
Oct 2019 – Oct 2022	PhD, Université Clermont Auvergne, France. (3 years) Thesis Supervisor: Dr. Romain Madar Temporal calibration of a high granularity timing detector (HGTD) and measurement of top quark spin correlation with the ATLAS detector. CERN-LPC Thesis
Oct 2019 – Aug 2020	ATLAS Qualification Task, France–Switzerland. (1 year) Supervisors: Dr. H. CORREIA, Dr. R. Madar, Dr. D. Boumediene Study of the temporal calibration of HGTD channels, ATLAS Internal Note.
Mar – Aug 2019	Internship, IJCLab, France. (6 months) Supervisors: Dr. Z. Zhang, Dr. L. Fayard Study of cross sections for the Drell–Yan process at the LHC, CERN Master Thesis.
Jun – Aug 2018	Summer Student, CERN (CMS). (3 months) Supervisors: Dr. E. Chapon, Dr. D. D’Enterria Study of missing transverse momentum (MET) in 2015 PbPb data, CERN Summer Student.

1.2. Education

Oct 2019 – Sep 2022	PhD in Particle Physics Université Clermont Auvergne, France Clermont Physics Laboratory, ATLAS group. Funded by the CNRS. Thesis Supervisor: Dr. Romain Madar
Oct 2018 – Jul 2019	Second Year of Master’s (M2) Université Cadi Ayyad, Morocco High Energy Physics, Astronomy, and Computational Physics. Graduated with First Class Honours. Scientific track, Major in Physics, Experimental Physics option. Supervisors: Prof. Oulen Mustapha, Prof. Chabab Mohamed
Oct 2017 – Jul 2018	First Year of Master’s (M1) Université Cadi Ayyad, Morocco High Energy Physics, Astronomy, and Computational Physics. Graduated with First Class Honours. Scientific track, Major in Physics, Experimental Physics option. Supervisors: Prof. Oulen Mustapha, Prof. Chabab Mohamed
2014 – Jul 2017	Bachelor’s Degree in Fundamental Physics Université Ibn Zohr, Morocco Graduated with Honours. Scientific track, Major in Physics, Fundamental Physics option.
2014 – Jul 2016	University Diploma (DEUG) Université Ibn Zohr, Morocco Graduated with Honours. Scientific track, Major in Physics, Experimental Physics option.
2014	Scientific Baccalaureate Lycée Abdellah ben Yassin, Morocco Graduated with Honours. Scientific track, Major in Physics, Experimental Physics option.

1.3. Languages and Computer Skills Languages: English (Fluent), French (Fluent), Arabic (Native), Berber (Native).

Computer Skills:

- BASIC KNOWLEDGE: GEANT4, Pythia8, Fortran, C, Mathematica, VBA, Maple, Docker, Git, GitHub.
- ELEMENTARY PROFICIENCY: Machine Learning models, Deep Learning (TF/Keras), Qt (C++), TRexFitter, XFitter, Matlab, Microsoft Windows, Jupyter Notebooks, Google Colab.
- WORKING PROFICIENCY: ROOT, C++, Python, MadGraph, Linux, L^AT_EX.

List of Recents Publications

2.1. Peer-Reviewed International Journals

1. **ATLAS Collaboration:** *Observation of quantum entanglement in top-quark pairs using the ATLAS detector.* **Nature, significant contribution.**
2. **ATLAS Collaboration:** *Observation of quantum entanglement in top-quark pair production using pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector.* **ATLAS Conference Note, significant contribution.**
3. **ATLAS Collaboration:** *Technical Design Report: A High-Granularity Timing Detector for the ATLAS Phase-II Upgrade.* **ATLAS-TDR-031.**

2.2. Internal Reports and Notes

1. **Private, peer-reviewed, 2022–2023:** Tnourji, Abdellah; Madar, Romain; Boumediene, Djamel Eddine. *High-Granularity Timing Detector in ATLAS: Simulation Study of t_0 Calibration.* **ATLAS Internal Note, significant contribution.**
2. **Private, non-peer-reviewed, 2018:** Tnourji, Abdellah. *Missing Transverse Momentum in Pb–Pb Collisions with the CMS Detector at the LHC.* **CERN STUDENTS Internal Note, significant contribution.**

2.3. Theses

1. **Public, 2019–2022:** Tnourji, Abdellah. *Time Calibration of the High Granularity Timing Detector and Measurement of Top Quark Spin Correlation with the ATLAS Detector.* **CERN-LPC Thesis.**
2. **Public, 2018–2019:** Tnourji, Abdellah. *The Impact of LHC Measurements on the Precision of the Parton Distribution Functions of the Proton.* **CERN Master Thesis.**

Referencec (in order)

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