




Adelina Lintuluoto

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 alintulu

EMPLOYMENT HISTORY - ACADEMIC

- 2021 – Present **Doctoral student in applied physics, Karlsruhe Institute of Technology and CERN**
- 2020 – 2021 **Technical student in applied physics, CERN, European Organisation for Nuclear Research, Geneva Switzerland.**
Joint project between the CERN EP-CMG group and the IT-CDA group. Automating and comparing CMS jet energy correction workflows. Implementing them in REANA, reana.io, a platform for reusable and reproducible analyses. This also meant implementing new features for REANA.
- 2018 – 2019 **Undergraduate research assistant, Helsinki Institute of Physics, CERN Geneva Switzerland.**
Stationed at CERN working with data preservation and open access with CERN
Open Data.
- 2018 - 2018 **Internship in experimental particle physics, Helsinki Institute of Physics, CERN Geneva Switzerland.**
Stationed at CERN working with the CMS group on Inclusive Jet Cross section analysis.
- 2017–2018 **Undergraduate course assistant, University of Helsinki, Helsinki Finland.**
Teaching assistant in 'Material Physics I', 'Material Physics II' and 'Applications of Quantum Physics'. I was responsible for creating and correcting the students' weekly assignments. In addition I held a weekly two hour exercise session where we went through the assignments together and the students were allowed to ask questions freely.

EDUCATION

- 2018-20 **MSc in Theoretical and Computational Methods in Physics (Distinction)**
Studies of jet energy corrections at the CMS experiment and their automation (thesis): Presentation of a novel method for automating the derivation of jet energy corrections from simulation. Thesis awarded: 5, passed with distinction.
Degree awarded: Master of Science
Courses included particle physics, high dimensional computational statistics and machine learning.
- 2015-18 **BA in Physics (Distinction)**
Structural Defects in Graphene (thesis): Presentation of the structural defects in graphene with focus on how it affects the material, mechanically, electronically, magnetically and chemically as well as potential applications arising from that. Thesis awarded: 5, passed with distinction.
Degree awarded: Bachelor of Science
Courses included material, computational and quantum physics, linear algebra and probability theory, as well as structures of algorithms and software projects.
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PUBLICATIONS

Published

Šimko T., Heinrich L., Lange C., **Lintuluoto A.**, MacDonell D., Mečionis A., Rodríguez Rodríguez, D., Shandilya P., and Vidal García M. (2021). Scalable declarative HEP analysis workflows for containerised compute clouds; a novel approach for experimental HEP data analyses that is centred around the declarative paradigm. *Frontiers in Big Data*.

Šimko T., Pascoal de Bittencourt H., Carrera E., Delgado Lopez D., Lange C., Lassila-Perini K., **Lintuluoto A.**, Lloret Iglesias L., McCauley T., Okraska J., Prelicpean D. and Savaniakas M. (2021). Open data provenance and reproducibility: a case study from publishing CMS open data. *EPJ Web of Conferences*.

GRANTS

Awarded

- 2021-24 Wolfgang Gentner Scholarship, German Federal Ministry of Education and Research (BMBF). Funding three year doctoral research at CERN.
- 2022 Funding of 12 600 € from Svenska Kulturfonden to support my stay at CERN as a doctoral student.

2022 Travel grant of 1900 € from Svenska Kulturfonden to attend the Fermilab-CERN Hadron Collider Physics Summer School 2022

TECHNICAL SKILLS

Languages Python, Golang, Java, C#, Matlab, R, Javascript, C++, Fortran, ROOT
(order of proficiency)

Software Jupyter Notebook, VIN, NETBEans, VisualStudioCode, Eclipse, Unity, Godot, LATEX, Libreoffice, Microsoftoffice

Machine learning PyTorch, Autograd, Keras, SciPy, Sckit-Learn

OUTREACH & WIDENING PARTICIPATION

2019 “An Introduction to CERN” seminar and interactive demonstration presented to Finnish Secondary School pupils

2018 & 19 “An Introduction to Studying at University of Helsinki” seminar and interactive demonstration presented to Finnish Secondary School pupils

2021 Shared particle physics facts on the Instagram account “thisissvenskfinland”. About 200-300 interactions per post.

2021 Guided a CMS Virtual Visit to the public of Finland. Recording added to YouTube: <https://youtu.be/tNckLv-4eXg>

2022 Guided a CMS Virtual Visit to Finnish sixth form for students. Recording added to YouTube: <https://youtu.be/9sVxF92WImc>

2022 Guided a CMS Virtual Visit to members of the South African Institute of Physics and Women in Physics in South Africa. Recording added to YouTube: <https://youtu.be/cyLJYkCtOgl>

AWARDS & RECOGNITION

2019 Winner of Zoonhackathon (hackathon organised by the US embassy in Helsinki 2019). Participated as a programmer in a team of three. Awarded 2000 €, additional 2000 € donated to a charity on behalf of our winning team.

2019 FGJ scholarship to represent the Finnish jamming scene at Slavic Game Jam 2019. Awarded event ticket and 200 € for travel and accommodation expenses.

INVITED SPEAKER

2021 **Science Now, University of Helsinki.**
'What is required to discover a new particle at CERN?'

WIDER ACADEMIC ENGAGEMENT

2021-present **Founder and leader of CMS Young Scientist Committee's (YSC) Journal Club**
Identified a need for a journal club serving the young scientist's community within the CERN CMS experiment. Worked with YSC to design, implement and lead the journal club.

REFEREES

Dr Clemens Lange
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Paul Scherrer Institute
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Prof Dr Günter Quast
Professor in experimental physics
Karlsruhe Institute of Technology
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