



Matias Paloranta

THEORETICAL PHYSICS STUDENT · RESEARCH TRAINEE

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“Improve by 1 % a day, and in just 70 days, you’re twice as good.”

Education

University of Helsinki

Helsinki, Finland

MASTER OF SCIENCE IN THEORETICAL PHYSICS

Sep. 2016 - PRESENT

- Master’s thesis: *Numerical modeling of $1/f$ noise in solids* (tentative title), currently in the writing process.
- Focus on particle physics.
- Minor subjects in computer science and statistics.
- 395/300 ECTS credits.

University of Helsinki

Helsinki, Finland

BACHELOR OF SCIENCE IN THEORETICAL PHYSICS

Sep. 2012 - Sep. 2016

- Bachelor’s thesis: *On the bound states of t -quarks* (in Finnish), grade 5/5.
- Minor subjects in experimental physics and mathematics.

Viherlaakso Upper Secondary School

Espoo, Finland

THE FINNISH MATRICULATION EXAMINATION

Aug. 2008 - May 2011

Relevant Experience

VTT Technical Research Centre of Finland Ltd

Espoo, Finland

RESEARCH TRAINEE & MASTER’S THESIS WORKER

Apr. 2017 - PRESENT

- Developed a simulation of a resistor network (MATLAB) to model the interactions of mobile lattice defects and charge carriers in solids.
- Analysis of the simulated resistance noise and reporting of the results.
- Part of a project on $1/f$ noise funded by the Academy of Finland.

Helsinki Institute of Physics

CERN, Geneva, Switzerland

TRAINEE

June 2018 - Aug. 2018

- Updated an analysis program (Python/C++) to work with 2017 particle collision data gathered by the CMS detector at the LHC.
- Preliminary data analysis and control plots with the 2017 CMS data.

Computer Skills

Programming Python, MATLAB, R, Java, C/C++, Fortran, LaTeX, Mathematica

Other Git, MS Office

Languages

Finnish Native

English Full professional proficiency

Spanish Limited working proficiency

Swedish Limited working proficiency

French Elementary

Extracurricular Activity

Resonanssi ry

BOARD MEMBER

- Student organization of physics students in the University of Helsinki.
- Promoted student interests in the Faculty of Science and communicated with faculty staff.
- Organized events and activities for upwards of 100 people.

Helsinki, Finland

Jan. 2014 - Dec. 2014

Faculty of Science, University of Helsinki

STUDENT TUTOR

- Guided new students in the university protocols and student life in general.

Helsinki, Finland

Aug. 2013 - Dec. 2014

Faculty of Science, University of Helsinki

HEAD OF STUDENT TUTORS

- Responsible for the physics tutors and the communication between faculty staff.

Helsinki, Finland

Jan. 2014 - May. 2014

Honors & Awards

2018 **Honorable Mention**, Graduation Ceremony of Elements of AI MOOC

Helsinki, Finland

2014 **Board of Executives' Honor**, Resonanssi ry

Helsinki, Finland