

## Personal information

 July 1 1992, Helsinki, Finland  
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## Education

2016 – 2020

PhD Astronomy  
University of Helsinki

2015 – 2016

MSc Theoretical Physics  
University of Helsinki

2012 – 2015

BSc Theoretical Physics  
University of Helsinki

## Other education

2015 – 2019

Subject teacher  
University of Helsinki  
Physics, Maths, Chemistry and IT.

## Skills

Fortran, Python, Matlab 5+ yrs

Linux, Git, L<sup>A</sup>T<sub>E</sub>X 4+ yrs

Html/CSS, SQL 3+ yrs

## Language proficiency

Finnish Native

English Fluent

Swedish Bureaucratic

Japanese Conversational

# Joonas Herranen

## Curriculum Vitae

## Vocational experience

Waveguide designer

Dispelix Oy, Espoo, Finland

Sep 2020 –

Numerical modeling of waveguide elements used in AR elements.

Doctoral Student

University of Helsinki, Department of Physics

2016 – 2020

Study of electromagnetic scattering from space dust grains. Development and testing of a software framework for solving the scattering-dynamical interactions between light and grains. Application in studying open problems in dust polarization observations.

Science Instructor

Ursa ry

2014 – 2018

Planning, organisation and execution of intensive tuition of mathematics and physics. Development of intensive education methods.

Research Assistant

University of Helsinki, Department of Physics

Jun – Oct 2015

Theoretical review of the alignment of particles in the interstellar medium. Development of a software framework based on the theory. Development and testing of the software used in the Master's thesis on the subject.

University Trainee

National Defense University, Department of Military Technology

Jun – Oct 2014

Study and data collection of Finnish critical infrastructure. Dependency and fault tolerance modelling of the infrastructure based on collected data.

## Grants and awards

UH funded salary position for a PhD candidate

University of Helsinki

2017 – 2020

Pro Gradu award for an exceptional MSc thesis

Faculty of Science, University of Helsinki

2016

Study grant

Student's foundation of Tavastia Nation

2015, 2013

Undergraduate grant

Fund for Mathematics and Natural Sciences

2015, 2013

Bronze medal in the International Chemistry Olympiad

ICHO 2011

2011