

Anna Małgorzata Suliga

Curriculum Vitae

Personal

Born: 28/04/1993 in Sosnowiec, Poland
Nationality: Polish
Affiliation: Niels Bohr Institute, University of Copenhagen
ORCID: 0000-0002-8354-012X

Education

- 2018–present **PhD candidate in Astroparticle Physics**
Expected graduation date: September 2021
Niels Bohr Institute, University of Copenhagen, Denmark
Thesis topic: Non-standard neutrino physics in the compact sources
supervisor: Irene Tamborra
- 9 Jul 2018 **Msc in Physics with specialization in Astrophysics**
Niels Bohr Institute, University of Copenhagen, Denmark
Thesis topic: Diffuse supernova neutrino background, supervisor: Irene Tamborra
- 28 Jan 2016 **Engineering degree (BSc) in Technical Physics**
The AGH University of Science and Technology in Kraków, Poland
Thesis topic: Analysis of the impact imposed by neutron spectrum on production and burn-up of actinides in nuclear reactors, supervisor: Mariusz Kopeć

Research interests

Astroparticle physics, neutrino physics, sterile neutrinos, non-standard neutrino interactions, neutrino and dark matter detectors

Peer-reviewed publications

3. **Anna M. Suliga, Irene Tamborra, and Meng-Ru Wu**
Lifting the core-collapse supernova bounds on keV-mass sterile neutrinos, JCAP **08** (2020) 018
2. **Anna M. Suliga, Irene Tamborra, and Meng-Ru Wu**
Tau lepton asymmetry by sterile neutrino emission - Moving beyond one-zone supernova models, JCAP **12** (2019) 019
1. **Klaes Møller, Anna M. Suliga, Irene Tamborra, and Peter B. Denton** *Measuring the supernova unknowns at the next-generation neutrino telescopes through the diffuse neutrino background*, JCAP **05** (2018) 066

Awards

- 08/2018 **Lørup Scholar Stipend**, award of 50,000 DKK for excellent MSc thesis work, Niels Bohr Institute, Denmark

Scientific presentations/seminars

Invited talks:

- 07/2020 **The impact of keV sterile neutrinos on core-collapse supernovae**
Brookhaven Neutrino Theory Virtual Seminar, Brookhaven National Laboratory
- 07/2020 **The impact of keV sterile neutrinos on core-collapse supernovae**
Journal Club, Virginia Tech, online
- 06/2020 **Non-standard physics scenarios in the supernovae**
Plenary talk, QUARKS 2020, Pereslavl Zalessky, Russia. Postponed to 2021
- 04/2020 **The impact of keV sterile neutrinos on core-collapse supernovae**
Transient Tuesday, DARK, Neils Bohr Institute, Denmark, online
- 08/2019 **Tau lepton asymmetry by sterile neutrino emission – Moving beyond one-zone supernova model**
Neutrino Quantum Kinetics in Dense Environments, Copenhagen, Denmark
- 03/2019 **Determining supernova unknowns with the diffuse supernova neutrino background**
Max Planck Institute for Physics, Munich, Germany

Contributed talks:

- 05/2019 **Determining supernova unknowns with the diffuse supernova neutrino background**
Supernova Neutrinos at the Crossroads: astrophysics, oscillation, and detection, Trento, Italy
- 01/2019 **Neutrinos - Introverts among elementary particles**
Introduction to University Pedagogy, Copenhagen, Denmark
- 01/2019 **Determining supernova unknowns with the diffuse supernova neutrino background**
Nordic Winter School on Particle Physics and Cosmology, Skeikampen, Norway
- 06/2018 **Determining supernova unknowns with the diffuse supernova neutrino background**
NBIA and Dark Summer School: Multi-Messengers from Compact Sources, Copenhagen, Denmark

Posters:

- 06/2020 **Lifting the core-collapse supernova bounds on keV-mass sterile neutrinos**
Neutrino 2020, United States, online

Additional courses, Phd schools, and internships

- 07/2019 **Advancing Theoretical Astrophysics**
Summer school, University of Amsterdam, The Netherlands
- 04/2019 **Responsible Conduct of Research**
PhD course, University of Copenhagen, Denmark
- 01/2019 **Introduction to University Pedagogy**
PhD course, University of Copenhagen, Denmark
- 11/2018 **Elementary Particle Physics**
PhD course, University of Copenhagen, Denmark
- 07/2015 **Internship DESY, Hamburg, Germany**
- Installing and upgrading software on the high sensitivity electronic devices, e.g., pattern generator, logic analyzer, multichannel high voltage supplier.
 - Testing the response quality of a new generation of chips and scintillator tiles for the Calice calorimeter (the International Linear Collider (ILC)).

Teaching experience

- fall 2019 Teaching Assistant, Datalogi for fysikere
- spring 2020 Teaching Assistant, Datalogi for fysikere

Computer skills

- Advanced PYTHON, C++, C, L^AT_EX, bash, git, MATLAB, Mathematica
- Basic Fortran

Extracurricular activities

- 2019 - **Transient Tuesdays**
- present Co-organizer of the bi-weekly discussions about transient objects' physics at the DARK, Niels Bohr Institute, Denmark

Referees

The following senior scientists are familiar with my studies and research activity:

1. **Associate Professor Irene Tamborra**
E-mail: tamborra@nbi.ku.dk, Tel: +45 35 33 32 27,
Affiliation: Niels Bohr Institute, University of Copenhagen, Denmark
2. **Assistant Research Fellow Meng-Ru Wu**
E-mail: mwu@gate.sinica.edu.tw, Tel: +886-2-2789-6779,
Affiliation: Institute of Physics, Academia Sinica, Taiwan
3. **Assistant Physicist Peter B. Denton**
E-mail: pdenton@bnl.gov, Tel: +1-631-214-0850,
Affiliation: Brookhaven National Laboratory, United States
4. **Associate Professor Darach Watson**
E-mail: darach@nbi.ku.dk, Tel: +45 35 32 59 94,
Affiliation: DARK, University of Copenhagen, Denmark