

PERSONAL INFORMATION

Name: Aurel Schneider

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Citizenship: Swiss

Marital status: Married, three children

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EDUCATION

10/2008 - 08/2012 Ph.D. in Physics, University of Zurich, Switzerland; title: *Dark matter and the free streaming scale*; advisor: Prof. Dr. Ben Moore; date of defence: 26/08/2012.

09/2006 - 08/2008 M.Sc. in Physics, University of Fribourg, Switzerland.

09/2003 - 08/2006 B.Sc. in Geography and Physics, University of Fribourg, Switzerland.

EMPLOYMENT HISTORY

09/2019 - today SNF Eccellenza Professor, Institute for Computational Science, Center for Theoretical Astrophysics and Cosmology, University of Zurich.

09/2016 - 08/2019 SNF Ambizione Research Fellow, Institute for Particle Physics and Astrophysics, ETH Zurich (affiliated to the Cosmology group of Prof. Dr. Alexandre Refregier).

09/2014 - 08/2016 Postdoctoral Researcher, Institute for Computational Science, University of Zurich (Sinergia postdoc employed within the program: *Euclid - high-precision cosmology in the dark sector*).

09/2012 - 08/2014 Postdoctoral Researcher (CosmoComp fellow with Prof. Peter Thomas; Early Researcher Mobility fellow SNF), Astronomy Centre, University of Sussex, United Kingdom.

RESEARCH

- Interests: Cosmology, Dark Matter, Structure Formation, Gravitational Lensing, Numerical Simulations, Astro-Particle Physics.
- Publications: 40 papers in peer-reviewed journals, total citation number of 3008, h-index of 30 (as of 24/09/2021, Google Scholar).

APPROVED RESEARCH GRANTS

- 2018 Eccellenza Grant, Swiss National Science Foundation. Title: *Gravitational Probes of Dark Matter* (1.85M CHF)
- 2016 Ambizione Grant, Swiss National Science Foundation. Title: *Exploring the Dark Matter Sector with Astronomical Surveys* (475k CHF).
- 2016 CSCS Computing Project s720. Title: *Emulating the Euclid Universe: Predictions for Weak Lensing and Galaxy Clustering* (Principal Investigator; 10M CPU Hours)
- 2015 CSCS Computing Project s592. Title: *Simulating the Euclid Universe and Correcting for Baryons* (Principle Investigator; 12M CPU Hours).
- 2014 Early Researcher Mobility Grant, Swiss National Science Foundation. Title: *Dark Matters: From Particle Cosmology to Astrophysics* (100k CHF).

SUPERVISION

Supervision of Ph.D. candidates Thimotée Schaeffer (since October 2019) and Jozef Bucko (since October 2020), University of Zurich.

Co-supervision of Ph.D. candidate Chaichalit Srisawat, Sussex University (Merger trees comparison project, 2012-2016).

Supervision of various Bachelor and Master students at ETH Zurich (Master thesis: N. Stoira, A. Weiss, T. Schaeffer) and the University of Zurich (Master thesis: F Hervas Peters, J. Hubert, Z. Cai, N. Chrishon, J. Frey).

TEACHING

Individual Seminar Work in Computational Science (5 ECTS, Fall 2021)

Introduction to Astronomy (5 ECTS, Spring 2021)

Organiser of the *Academia Industry Modelling Week* (Fall 2020).

Several guest lectures for the courses *The Universe* (Spring 2020, UZH), *Theoretical Astrophysics* (Fall 2019, UZH), and *Astrophysics II* (Fall 2018, ETHZ).

Block-Course on Sterile Neutrinos (together with Dr. A. Merle, November 2017, Institute for Basic Science, Daejeon, South Korea)

Block-Course on Analytical Aspects of Nonlinear Structure Formation (Spring 2014, University of Sussex, UK)

REVIEWING ACTIVITIES

External reviewer for the *Dutch Research Council* (Veni Grants)

External reviewer for the *Fund for Scientific Research* (FNRS) of Belgium.

Regular referee for Physical Review D (PRD), Astrophysical Journal (ApJ), Monthly Notices of the Royal Service Astronomical Society (MNRAS), Journal of Cosmology and Astroparticle Physics (JCAP).

SELECTED TALKS

- 2021 Colloquium of the Institute for Cosmology and Gravitation, Portsmouth (seminar)
CMB-S4 Summer Collaboration Meeting (invited external speaker)
SKA Science Conference (virtual conference)
- 2020 Max Planck Institute for Astrophysics Seminar, Munich (virtual seminar)
CEA-Saclay Seminar, Paris (virtual seminar)
- 2019 Next Frontiers in the Search for Dark Matter, Conference, Firenze (invited talk)
German Centre for Cosmological Lensing (virtual seminar)
- 2018 Fritz Zwicky der Wissenschaftler, Glarus, Switzerland (outreach talk)
Department of Physics, Oxford University, UK (seminar)
Observatoire de Strasbourg, France (seminar)
Dark Matter at the Dawn of Discovery Conference, Heidelberg (invited talk)
- 2017 Department of Physics, University of Basel, Switzerland (seminar)
Strategic Dark Matter Initiative, University of Oslo, Norway (seminar)
Physics Department, New York University, Abu Dhabi, Arabic Emirates (seminar)
Bright and Dark Universe, Conference, Naples, Italy (invited speaker)
- 2016 Neutrino Oscillation Workshop (NOW), Otranto, Italy (invited speaker)
Astrophysics of Dark Matter Conference, Sexten, Italy (invited speaker)
Astronomy Colloquium, University of Sussex, United Kingdom (seminar)
- 2015 ν -Dark 2015 workshop, Garching, Germany (invited speaker)
Theory Division, CERN, Geneva, Switzerland (seminar)
Max Planck Institut für Physik, Munich, Germany (seminar)

2014 DAMTP Cambridge, United Kingdom (seminar)
SISSA, Trieste (seminar)
Institute for Cosmology and Gravitation, Portsmouth (seminar)

REFERENCES

Prof. Dr. Romain Teyssier (previous employer)

Department of Astrophysical Sciences, Princeton University
Email: teyssier@princeton.edu

Prof. Dr. Alexandre Refregier (previous employer)

Institute for Particle Physics and Astrophysics, ETH Zurich
Email: alexandre.refregier@phys.ethz.ch

Prof. Dr. Peter Thomas (previous employer)

Department of Physics and Astronomy, University of Sussex
Email: p.a.thomas@sussex.ac.uk

Prof. Dr. Ben Moore (PhD supervisor)

Institute for Computational Science, University of Zurich
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Zurich, 24/09/2021