

Folkert Nobels

Curriculum Vitae

Leiden observatory

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GitHub: fonotec

Education

- 2018–2022 **Leiden Observatory, Leiden, NL, Ph.D. Astronomy.**
- Research on the precipitation of the intracluster medium in galaxy groups and clusters
 - Research on star formation relations in disk galaxies
 - Research on morphological quenching
 - Part of the development team of the COLIBRE cosmological simulation
 - Part of the development team of the SWIFT code
- 2015–2018 **University of Groningen, Groningen, NL, M.Sc. Astronomy.**
- Graduated with honours with a 8.9 out of 10
- 2015–2018 **University of Groningen, Groningen, NL, M.Sc. Physics.**
- Graduated with honours with a 8.9 out of 10
- 2012–2015 **University of Groningen, Groningen, NL, B.Sc. Astronomy.**
- Graduated with honours with a 8.5 out of 10
- 2012–2015 **University of Groningen, Groningen, NL, B.Sc. Physics.**
- Graduated with honours with a 8.6 out of 10

Prizes and awards

- 2017 **Aart Bosman Student Excellence Award, Groningen, NL.**
- Award for the most excellent student of the University of Groningen
- 2017 **GUF-100 Prize, Groningen, NL.**
- Award for the most excellent student of the faculty of mathematics and natural sciences of the University of Groningen
- 2015 **NOVA fellowship, Groningen, NL.**
- Fellowship for young talent in astronomy awarded by NOVA (Netherlands Research School for Astronomy)
- 2015–2018 **Multiple prizes in physics contests, NL.**
- Utrecht physics challenge 4th out of 150 participants (with only 3 point of difference with the 1st)
 - PION (Project interuniversity olympiade physics), solving problems in groups of 4, finished 2th, 2th and 4th in different years

Teaching experience

- 2021 **Supervision of a B.Sc. student, Leiden, NL.**
- Project on morphological quenching in disk galaxies
- 2019–2021 **Teaching assistant Numerical Recipes for Astrophysics, Leiden, NL.**
- M.Sc. course on advanced numerical recipes
- 2019–2020 **Teaching assistant Galaxies: structure, dynamics and evolution, Leiden, NL.**
- M.Sc. course on galaxy formation and dynamics

- 2013–2018 **Teaching assistant on several courses, Groningen, NL.**
- M.Sc. course on electrodynamics of radiation processes
 - B.Sc. course introduction to programming and numerical methods
 - B.Sc. course on quantum physics
 - B.Sc. course on statistical physics
 - Several B.Sc. courses related to calculus and linear algebra

Contributed conference talks

- July 2022 **Virgo meeting, Munich.**
The interplay between AGN feedback and precipitation of the intracluster medium in simulations of galaxy groups and clusters
- June 2022 **EAS - Properties and impact of large-scale multiphase AGN outflows, Valencia.**
The interplay between AGN feedback and precipitation of the intracluster medium in simulations of galaxy groups and clusters
- Nov. 2021 **Predictive Power of Computational Astrophysics as a Discovery Tool, online.**
Simulating the multiphase gas cycle in galaxy clusters
- Nov. 2021 **The 1st KIAA Forum on Gas in Galaxies for Early Career Scientists, online.**
Simulating the multiphase gas cycle in galaxy clusters
- Jan. 2021 **VIRGO meeting, online.**
Part of EAGLE-XL update
- July 2020 **EAS - Supernova host environments, online.**
What can cosmological simulations tell about supernovae type Ia rates?
- July 2020 **EAS - Crossing the characteristic mass scales in galaxy evolution, online.**
Can effective supernovae type Ia feedback help quench the most massive galaxies?
- Jan. 2020 **Virgo meeting, Durham, UK.**

Contributed conference posters

- July 2021 **EAS - Galaxy clusters and AGNs: advances in theoretical simulations and observations by next-generation surveys, online.**
The connection between AGN, cold gas and gas in the circumgalactic medium
- July 2020 **EAS - Linking gas and star formation throughout cosmic time, online.**
Which physics is required in hydrodynamical simulations to reproduce gas and star formation scaling relations on kpc scales that agree with observations?
- Nov. 2019 **Computational Fluid Dynamics in Astrophysics, Tenerife.**
Understanding the Kennicutt-Schmidt relation

Skills

- Languages Python, C/C++
Codes Swift, Velociraptor

References

Prof. dr. J. Schaye,
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Leiden observatory,
Leiden, the Netherlands.

Prof. dr. R.G. Bower,
r.g.bower@durham.ac.uk,
Institute for Computational Cosmology,
Durham, United Kingdom.

dr. M. Schaller,
schaller@strw.leidenuniv.nl,
Lorenz institute and Leiden observatory,
Leiden, the Netherlands.

Publications

1. Filip Husko, Cedric G. Lacey, Joop Schaye, Matthieu Schaller, and Folkert S. J. Nobels. Spin-driven jet feedback in

- idealised simulations of galaxy groups and clusters. *MNRAS*, August 2022, [arxiv.org:2206.06402](https://arxiv.org/abs/2206.06402)
2. Folkert S. J. Nobels, Joop Schaye, Matthieu Schaller, Yannick M. Bahé, and Evgenii Chaikin. The interplay between AGN feedback and precipitation of the intracluster medium in simulations of galaxy groups and clusters. *MNRAS*, July 2022, [arxiv:2204.02205](https://arxiv.org/abs/2204.02205)
 3. Evgenii Chaikin, Joop Schaye, Matthieu Schaller, Yannick M. Bahé, Folkert S. J. Nobels, and Sylvia Ploeckinger. The importance of the way in which supernova energy is distributed around young stellar populations in simulations of galaxies. *MNRAS*, 514(1):249–264, July 2022, [arxiv:2203.07134](https://arxiv.org/abs/2203.07134)
 4. Yannick M. Bahé, Joop Schaye, Matthieu Schaller, Richard G. Bower, Josh Borrow, Evgenii Chaikin, Roi Kugel, Folkert Nobels, and Sylvia Ploeckinger. The importance of black hole repositioning for galaxy formation simulations. *MNRAS*, May 2022, [arxiv.org:2109.01489](https://arxiv.org/abs/2109.01489)