Curriculum Vitae: Daniel Mikkola

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🌐 https://mikkolad.github.io/

Personal information

Surname: Mikkola
Names: <u>Daniel</u> Zebastian
Title: Mr.
Date of birth: 1992 October 6th
Nationality: Swedish

Work address:
Lund Observatory
Dept. of Astronomy & Theoretical Physics
Box 43, SE-22100 Lund, Sweden

Academic history

2017 – 2022 🔖 **Ph.D., Lund University** in Astronomy.
Thesis title : *Galactic dynamics in the Gaia era*.
Supervisors : David Hobbs, Paul J. McMillan
Research field : Galactic dynamics, N-body simulations, Computational astrophysics.

2016 – 2017 🔖 **M.Sc., Lund University** in Astrophysics.
Thesis title : *Radial migration of stars, measured in N-body simulations*.
Supervisor : Paul J. McMillan
Research field : Spiral galaxies, Radial migration, N-body simulations.

2015 – 2016 🔖 **Master student, Aarhus University** in Astronomy.
60 ECTS, one year of courses within the programme.

2012 – 2015 🔖 **B.Sc. Lund University** in Astronomy.
Thesis title : *Formation of super-Earths via pebble accretion onto planetesimals*.
Supervisor : Anders Johansen
Research field : Planet formation, Exoplanets

Research interests

Galactic dynamics ● Galaxy evolution ● Stellar kinematics ● Galactic structure ● Computational astrodynamics ● Galactic solar neighbourhood ● Disc galaxies

Publications

1 **Mikkola, D.**, McMillan, P. J., & Hobbs, D. (in prep). *The detailed velocity distribution of the solar neighbourhood in gaia edr3*.

2 **Mikkola, D.**, McMillan, P. J., Hobbs, D., & Wimarsson, J. (submitted). *Velocity distribution of white dwarfs in gaia edr3*. MNRAS.

3 **Mikkola, D.**, McMillan, P. J., & Hobbs, D. (2020). *Radial migration and vertical action in n-body simulations*. MNRAS, *495*(3), 3295–3306. 🔗 https://doi.org/10.1093/mnras/staa1223

Contributed presentations

28 June - 2 July 2021 🔖 **European Astronomical Society 2021, (Virtual), S15 & SS21**, Posters
S15: The velocity distributions of white dwarfs in Gaia EDR3
SS21: Radial migration and vertical action in N-body simulations

29 June - 3 July 2020 🔖 **European Astronomical Society 2020, (Virtual)**, Poster
Which stars radially migrate in disc galaxies?

Contributed presentations (continued)

6 May 2020	▌ **MPIA Heidelberg (Germany)**, Talk *Radial migration and vertical action in N-body simulations*
5 May 2020	▌ **Stellar Populations group, Lund (Sweden)**, Talk *Radial migration and vertical action in N-body simulations*
27 May 2019	▌ **The New Milky Way meeting, Örenäs castle (Sweden)**, Talk *Effects of spiral arms in N-body galaxy simulations*

Grants and awards

November 2020	▌ **Walter Gyllenberg foundation** grant from the Royal Physiographic Society of Lund, for computing resources and academic visitors. **Amount:** 105 000 SEK.

Teaching

Lecturer	▌ Introduction to Python programming - (2018 - 2021)
Course assistant	▌ Statistical Methods in Astrophysics. Masters level course - (2017 - 2021)
	▌ Computational Astrophysics. Masters level course - (2017 - 2022)

Teaching qualifications

Pedagogical course: 4.5 ECTS, Learning and Teaching in Higher Education - Theory and Practice - (2019)

Outreach/Representation

Outreach

2013 -	▌ **Physics & lasershow:** Lund university. Employee, sound/lights, on-stage performer. Inspirational show with physics experiments and lasers meant to inspire youth to study science. **Event participation:** > 500 shows given in Sweden. > 50 shows given Internationally in: Denmark, Montenegro, Slovenia, Poland
2021	▌ **Swedish Astronomical Youth Association:** Inspirational Lecture
2020	▌ **Swedish Astronomical Youth Association:** Inspirational Lecture
	▌ **Malmö Astronomy- & Spaceflight Society MARS:** Inspirational Lecture

Representation

2021 -	▌ **Trade Union ST** Lund university, Workplace representative
	▌ **NDR The Science Doctoral Student Council** Lund university:
2020 -	Lund Astronomy Advisory Group (LAAG) PhD representative
2017-2018	Dept. of Astronomy and Theoretical Physics Lund university, Board member

Outreach/Representation (continued)

2013-2015   ■   **LUNA Science Student Union** Lund university, Board member

Skills

Languages   ■   Fluent in English & Swedish with strong understanding of Danish.

Coding   ■   Python, MATLAB, LaTeX, C++ , Html

Databases   ■   ADQL