

CURRICULUM VITAE

Linn E.J. Eriksson

Full name: Linn Elisabet Johanna Eriksson

Mail: leriksson@amnh.org

ORCID  0000-0002-8247-6453

Mailing address work:

American Museum of Natural History

200 Central Park West, New York

NY 10024, USA

Primary research interests

Simulations of planet formation: dust-growth, planetesimal formation,
planet-disk interactions, giant planet formation

Professional appointments

Department of Astrophysics, American Museum of Natural History	July 2025 – present
<i>Research Scientist</i>	
Institute for Advanced Computational Science, Stony Brook University	January 2023 – June 2025
<i>Postdoctoral fellow</i>	
Lund Observatory, Lund University	June 2022 – December 2022
<i>Postdoc</i>	
Lund Observatory, Lund University	June 2018 – August 2018
<i>Research assistant</i>	
Lund Observatory, Lund University	June 2017 – August 2017
<i>Research assistant</i>	

Education

PhD, Lund University	September 2018 – May 13, 2022
<i>Thesis advisor: Anders Johansen, Beibei Liu, Thomas Ronnet & Oscar Agertz</i>	
<i>Thesis topic: The formation and fate of planetesimals at planetary gap edges</i>	
MSc, Lund University	September 2016 – May 2018
<i>Thesis advisor: Anders Johansen</i>	
<i>Thesis topic: Planet migration in evolving protoplanetary discs</i>	
BSc, Lund University	September 2013 – May 2016
<i>Thesis advisor: Anders Johansen</i>	
<i>Thesis topic: The chemical composition of hot and cold gas giants</i>	

As first author

1. “Planets and planetesimals at cosmic dawn: vortices as planetary nurseries”, **Eriksson, L. E. J.**, Menon, S., Carrera, D., Lyra, W., Burkhart, B., 2025, MNRAS, 542, pp.641-655
2. “Particle fragmentation inside planet-induced spiral waves”, **Eriksson, L. E. J.**, Yang, C-C., Armitage, P., 2025, MNRAS, 537, L26-L32
3. “Can Uranus and Neptune form concurrently via pebble, gas, and planetesimal accretion?”, **Eriksson, L. E. J.**, Mol Lous, M. A. S., Shibata, S., Helled, R., 2023, MNRAS, 526, 4860-4876
4. “A low accretion efficiency of planetesimals formed at planetary gap edges”, **Eriksson, L. E. J.**, Ronnet, T., Johansen, A., Helled, R., Valletta, C., Petit, A. C., 2022, A&A, 661, A112
5. “The fate of planetesimals formed at planetary gap edges”, **Eriksson, L. E. J.**, Ronnet, T., Johansen, A., 2021, A&A, 648, A112
6. “Pebble drift and planetesimal formation in protoplanetary discs with embedded planets”, **Eriksson, L. E. J.**, Johansen, A., Liu, B., 2020, A&A, 635, A110
7. “Circularizing Planet Nine through dynamical friction with an extended, cold planetesimal belt”, **Eriksson, L. E. J.**, Mustill, A. J., Johansen, A., 2018, MNRAS, 475, 4609-4616

As coauthor

1. “Dust Collisions in Protoplanetary Disks: Atomic Simulations of the Surface Free Energy”, Morrissey, L. S., Ebel, D. S., **Eriksson, L. E. J.**, Georgiou, A., Huang, Z., Mac Low, M. -M., Pfeil, T., Accepted for publication in The Astronomical Journal
2. “Positive feedback: II. How dust coagulation inside vortices can form planetesimals at low metallicity”, Carrera, D., **Eriksson, L. E. J.**, Lim, J., Lyra, W., and Simon, J. B., 2025, A&A, 701, L1
3. “On Linking Planet Formation Models, Protoplanetary Disk Properties, and Mature Gas Giant Exoplanet Atmospheres”, Feinstein, A. D. et al. incl. Eriksson, L. E. J. arXiv:2506.00669
4. “Positive feedback: How a synergy between the streaming instability and dust coagulation forms planetesimals”, Carrera, D., Lim, J., **Eriksson, L. E. J.**, Lyra, W., and Simon, J. B., 2025, A&A, 696, L23
5. “Atmospheric signatures of giant exoplanet formation by pebble accretion”, Madhusudhan, N., Bitsch, B., Johansen, A., **Eriksson, L. E. J.**, 2017, MNRAS, 469, 4102-4115

Grants and Fellowships

1. NASA Emerging Worlds (PI)
Title: Modeling planetesimal formation from streaming instability in self-consistent protosolar disk environments
Award year: 2025
Awarded funds: 704,081\$
Awarded computer allocation: 57.2M CPU hours and 15TB storage space on mass storage system

2. IACS postdoctoral fellowship, Stony Brook University
Competitive research fellowship; offer accepted
Year of initial offer: 2022
3. The Märta and Eric Holmberg Endowment
Title: The fate of planetesimals formed at planetary gap edges
Award year: 2020
Awarded funds: 105,000 SEK (~10k USD)
4. The Fund of the Walter Gyllenberg Foundation
Title: Connecting planet formation simulations with ALMA
Award year: 2018
Awarded funds: 110,000 SEK (~10k USD)

Invited seminars

1. 2025: Max Planck Institute for Solar System Research, Göttingen, Germany
2. 2024: European Southern Observatory, Santiago, Chile
3. 2024: University of Alabama Astrophysics Seminar, Tuscaloosa, USA
4. 2023: Universite de Montreal's Astrophysics Seminar Series, Montreal, Canada
5. 2022: Uppsala University Division of Astronomy, Uppsala, Sweden
6. 2022: ICS Theoretical Astrophysics and Computational Science Seminar, Zürich, Switzerland

Conference presentations

1. 2025: *ISSI Workshop on Unsolved mysteries of the Uranian system*, Bern, Switzerland (invited to give a talk and contribute to a book chapter in a Topical Collection in Space Science Reviews that will be reprinted as a hardcover book in the Space Sciences Series of ISSI by Springer Nature)
2. 2025: *Origins of Solar Systems GRC*, South Hadley, USA (poster)
3. 2025: *Pebbles in Planet Formation*, Tokyo, Japan (talk)
4. 2024: *The Minor Bodies of the Solar System: Space missions, Observations and Theory*, Ringberg, Germany (invited talk)
5. 2024: *Challenge Accepted: Linking Planet Formation with Present-Day Atmospheres*, Heidelberg, Germany (invited talk)
6. 2024: *ExoNYC*, New York City, USA (talk)
7. 2023: *TCAN Disk Hydro & Planet Formation*, Tuscon, USA (talk)
8. 2023: *Origins of Solar Systems GRC*, South Hadley, USA (poster)
9. 2023: *Protostars and Planets VII*, Kyoto, Japan (poster)
10. 2022: *Computational astrophysics in the ngVLA era*, New York City, USA (talk)
11. 2022: *Exoplanets IV*, Las Vegas, USA (talk)
12. 2021: *The formation of the Solar System*, Ringberg, Germany (invited talk)
13. 2020: *Planetesimal formation meeting*, Virtual (talk)
14. 2019: *Great barriers in planet formation*, Palm Cove, Australia (talk)

15. 2019: *From stars to Planets II*, Göteborg, Sweden (poster)
16. 2019: *Frejus meeting*, Frejus, France (talk)
17. 2018: *The Dynamical Universe for All*, Lund, Sweden (talk)

Teaching & Advising

1. 2025: Advisor of summer student Raymond Kelly
2. 2023: Lecturer on CCA Fluid Dynamics Summer School
3. 2019-2021: Teaching assistant on course *Introduction to Astrophysics*
4. 2020: Teaching assistant on course *Basic Statistical Physics and Quantum Statistics*

Selected outreach

1. 2023: Invited popular science article to the Swedish physics newspaper Fysikaktuellt
2. 2022: Popular science talk at the TYCHO BRAHE astronomical society
3. 2021: Popular science talk at Göteborgs astronomiska klubb