

Eric Rohr

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Education

Ph.D. Astronomy, 2024; Universität Heidelberg October 2020-Present
Jellyfish Galaxies and the Multi-Phase Nature of Gas Around Galaxies. Advisor: Dr. Annalisa Pilleich.

B.Sc. Astronomy-Physics, 2020; *University of Virginia* August 2016-May 2020
Why We Should Kerr About the Dark Secrets of Relativistic Accretion Disks in Athena++. Advisor: Prof. Shane Davis.

Advanced Studies Diploma; *Atlee High School* September 2012-June 2016

Academic Appointments and Research Experience

Ph.D. Student and IMPRS-HD Fellow October 2020-Present
At the Max Planck Institut für Astronomie as a part of the International Max Planck Research School for Astronomy and Cosmic Physics at the Universität Heidelberg; Advisor: Dr. Annalisa Pillepich. Thesis title: *Jellyfish Galaxies as Probes of the Cosmic Gas*

Research Assistant May 2020-July 2020
At the University of Virginia. Advisor: Prof. Shane Davis. Project: *Why We Should Kerr About the Dark Secretes of Relativistic Accretion Disks in Athena++*.

Undergraduate Research Assistant May 2019-May 2020
At the University of Virginia. Advisor: Prof. Shane Davis. Project: *Why We Should Kerr About the Dark Secretes of Relativistic Accretion Disks in Athena++*.

VSGC Undergraduate Research Scholar August 2018-May 2019
At the University of Virginia as part of the Virginia Space Grant Consortium. Advisor: Prof. Mark Whittle. Project: *HST STIS Observations of the Central Radio/X-ray Source in the Compact Starburst Galaxy Henize 2-10*.

ThinkSwiss Research Scholar May 2018-August 2018
At the Universität Zürich. Advisor: Prof. Robert Feldmann. Project: *Describing the Galaxy Size-Halo Size Relation at Cosmic Noon in FIREbox*.

Publications

A current list of all publications can be found on [ads](#).

As a first author:

4. Rohr, E., Pillepich, A., Nelson, D., et al. in review: “The cooler past of the intracluster medium in TNG-Cluster”.
3. Rohr, E., Pillepich, A., Nelson D. et al. (2024): “The hot circumgalactic media of massive cluster satellites in the TNG-Cluster simulation: existence and detectability”. *A&A*, 686, A86.
2. Rohr, E., Pillepich, A., Nelson D. et al. (2023): “Jellyfish galaxies with the IllustrisTNG simulations - when, where, and for how long does ram pressure stripping of cold gas occur?”. *MNRAS*, 524, 3502.
1. Rohr, E., Feldmann, R., Bullock, J. et al. (2022): “The galaxy-halo size relation of low-mass galaxies in FIRE”. *MNRAS*, 510, 3967.

As a contributing author:

5. Ayromlou, M., Nelson, D., Pillepich A. et al. incl. Rohr, E. accepted: “An Atlas of Gas Motions in the TNG-Cluster Simulation: from Cluster Cores to the Outskirts”. A&A. arXiv.2311.06339.
4. Lehle, K., Nelson D., Pillepich A. et al. incl. Rohr, E. (2024): “The heart of galaxy clusters: demographics and physical properties of cool-core and non-cool-core halos in the TNG-Cluster simulation”. A&A, 687, A129.
3. Nelson, D., Pillepich, A., Ayromlou M. et al. incl. Rohr, E. (2024). “Introducing the TNG-Cluster Simulation: overview and physical properties of the gaseous intracluster medium”. A&A, 686, A157.
2. Zinger, E., Pillepich, A., Joshi, G. et al. incl. Rohr, E. (2024): “Jellyfish galaxies with the IllustrisTNG simulations - citizen-science results towards large distances, low-mass hosts, and high redshifts”. MNRAS, 527, 8257.
1. Göller, J., Joshi, G., Rohr, E. et al. (2023): “Jellyfish galaxies with the IllustrisTNG simulations - No enhanced population-wide star formation according to TNG50”. MNRAS, 525, 3551.

Conferences, Talks, and Schools

- **Invited Talk*** at the *Resolving the Circumgalactic Medium and Its Impact on Galaxy Evolution* conference. November 2024.
- **Invited Seminar*** at the University of Zurich. November 2024.
- **Invited Talk** at the Lunch Talk Series at the European Southern Observatory: “Satellite Signatures in the Multiphase Halo Gas with the IllustrisTNG and TNG-Cluster Simulations”. Garching bei München, Germany. July 2024.
- **Contributed Talk** at the *EAS Annual Meeting 2024*: “Observable signatures from massive satellites in TNG-Cluster”. Remote in Padova, Italy. July 2024.
- **ePoster** at *EAS Annual Meeting 2024*: “The hard lives of satellite galaxies in the TNG and TNG-Cluster simulations”. Remote in Padova, Italy. July 2024.
- **Invited Talk** at the Cosmology Seminar at the Max Planck Institute for Astrophysics: “The case for the CGM around massive satellites in TNG-Cluster”. Garching bei München, Germany. April 2024.
- **Invited Talk** at the Cosmic Baryon Cycle from Space workshop: “The satellite-CGM connection in TNG”. Bern, Switzerland, February 2024.
- **Poster** at the *Building Galaxies from Scratch* conference: “Comparing star formation and stellar feedback models in jellyfish galaxy bodies and tails”. Vienna, Austria. February 2024.
- **Talk** at Galaxy Coffee at the Max Planck Institute for Astronomy: “The case for the existence and detectability of the satellite circumgalactic media in TNG-Cluster”. Heidelberg, Germany. January 2024.
- **Invited talk** at Galaxy Coffee at the Institute of Astrophysics of the Canary Islands: “Introducing the TNG-Cluster Simulation: the case for the circumgalactic medium around massive satellites”. La Laguna, Tenerife, Spain. November 2023.
- **Invited Talk** at the Galaxy Cluster Seminar at the Center for Astrophysics | Harvard & Smithsonian: “Introducing the TNG-Cluster Simulation: the case for the circumgalactic medium around massive satellites”. Remote in Cambridge, Massachusetts, USA. November 2023.
- **Contributed talk** at the *Journey through Galactic Environments* conference: “Jellyfish galaxies as sources of cold gas in the CGM in the IllustrisTNG Simulations”. Porto Ercole, Italy. September 2023.
- **Talk** at Galaxy Coffee at the Max Planck Institute for Astronomy: “Understanding the CGM of massive satellite galaxies in the TNG-Cluster simulation”. Heidelberg, Germany. September 2023.
- **Talk** at Galaxy Coffee at the Max Planck Institute for Astronomy: “Jellyfish galaxies with IllustrisTNG: when, where, and for how long does RPS of cold gas occur?”. Heidelberg, Germany. April 2023.
- **Poster** at the Saas Fee Winter School *Circum-Galactic Medium Across Cosmic Time*: “The 5 W’s of Ram Pressure Stripping in TNG Jellyfish”. Les Diablerets, Switzerland. March 2023.
- **Talk** at Galaxy Coffee at the Max Planck Institute for Astronomy: “First steps towards jellyfish galaxies as probes of the cosmic gas”. Heidelberg, Germany. September 2022.
- **Contributed talk** at *What Matter(s) Around Galaxies* conference: “Jellyfish galaxies with the IllustrisTNG simulations: when, where, and for how long does ram pressure occur, and implications for the cold CGM gas”. Champuloc, Italy. September 2022. [Link to slides](#).

- **Contributed talk** at the *Epoch of Galaxy Quenching* conference: “Jellyfish Galaxies with the IllustrisTNG simulations: when, where, and for how long does cold gas mass loss occur?”. Cambridge, United Kingdom. September 2022. [Link to talk](#).
- **E-Poster** at the *Galaxy Clusters 2022* virtual conference: “When, where, and how long do IllustrisTNG jellyfish galaxies take to lose their gas?”. Virtually held in Baltimore, Maryland, USA. April 2022.
- **Online Participant** at the KITP Program *Fundamentals of Gaseous Halos*. Held virtually in Santa Barbara, California, USA. January-March 2021.
- **Invited Talk** at the Cosmic Dawn Center: “Describing the Galaxy-Halo Size Relation at Cosmic Noon in FIREbox”. Copenhagen, Denmark. February 2020.
- **Invited Talk** at the University of Ghent: “Describing the Galaxy-Halo Size Relation at Cosmic Noon in FIREbox”. Ghent, Belgium. February 2020.
- **Contributed talk** at the *AAS 235 Winter Meeting 2020*: “Describing the Galaxy-Halo Size Relation at Cosmic Noon in FIREbox”. Honolulu, Hawaii. January 2020. [Link to abstract](#).
- **Poster** at the *AAS 233 Winter Meeting 2019*: “HST STIS Observations of the Central Radio/X-ray Source in the Compact Starburst Galaxy Henize 2-10”. Seattle, Washington, USA. January 2019. [Link to abstract](#).
- **Poster** at the *IAU Symposium 344 at General Assembly XXX*: “HST STIS Observations of the Central Radio/X-ray Source in the Compact Starburst Galaxy Henize 2-10”. Vienna, Austria. August 2018. [Link to conference proceedings](#).

Honors and Awards

- *D. Nelson Limber Prize* from the Department of Astronomy at the University of Virginia in May 2020. **\$500**.
- *Alexander Vyssotsky Prize* from the Department of Astronomy at the University of Virginia in May 2019. **\$1,000**.
- *Undergraduate Research Scholarship* from the Virginia Space Grant Consortium, a division of NASA, to be taken at the University of Virginia from August 2018-May 2019. **\$4,000**.
- *ThinkSwiss Research Scholarship* from the Office of Science, Technology, and Higher Education at the Embassy of Switzerland, to be taken at the University of Zurich from May-August 2018. **4,800 CHF**.

Teaching and Mentoring


- **Co-Supervisor** of Fulbright Fellow Shalini Kurinchi-Vendhan at the Max Planck Institute of Astronomy with Annalisa Pillepich, November 2023-Present
- **Tutor** for the Fortgeschrittenenpraktikum Wellenfrontanalyse (Advanced Lab on Wavefront Analysis; FP36) at the University of Heidelberg. Winter Semester 2022-23.
- **Assistant Tutor** at the Saas Fee Winter School *Circum-Galactic Medium Across Cosmic Time*. March 2023.
- **Tutor** for Cosmology (MVAstro4) at the University of Heidelberg. Summer Semester 2021, 2022.
- **Teaching Assistant** for Observational Astronomy (ASTR3130) at the University of Virginia. Spring 2020.
- **Tutor** for Advanced Placement (AP) Physics as part of the Global Teaching Project remotely teaching high school students in Mississippi. Fall 2019-Spring 2020.
- **Teaching Assistant** for the undergraduate telescope observing lab at the University of Virginia. Fall 2017-Spring 2020.
- **Co-Instructor** for The Philosophical Implications of Physics (INST1550) at the University of Virginia. Spring 2019.
- **Lab Assistant** for Elementary Physics Lab I and II (PHYS2630 and PHYS2640). Fall 2018-Spring 2019.


Service & Outreach

- Referee for MNRAS, A&A, and AAS Journals. 2022-Present

- Student Representative for the 16th generation of IMPRS-HD students. Fall 2020-Present.
- Member of the International Max Planck Research School Board in Heidelberg. 2022-Present.
- Published blog “How Do the Tails of Jellyfish Galaxies Form” on the Heidelberg [STRUCTURES Blog](#). April 2024.
- Organizer of Merendella (Happy Hour) at the Max Planck Institute for Astronomy. Summer 2021-2023.
- Published pub “Quantifying how a jellyfish galaxy loses its cold gas” on the [Galactic Atmospheres](#) forum. October 2023.
- Volunteer at Explore Science public day in Mannheim, Germany (in German). June 2022.
- Student Representative on the Graduate-Undergraduate Committee at the Department of Astronomy at the University of Virginia. Fall 2019-Spring 2020.
- Volunteer at the Leander McCormick Observatory Public Nights at the University of Virginia. Fall 2017-Spring 2020.

Languages

 **Computer:** Python (expert), C (advanced), C++ (advanced), Fortran (proficient), html (proficient)

 **Natural:** English (native), German (fluent, C1)