Eric Rohr

Max Planck Institut für Astronomie
Königtushl 17
69117, Heidelberg, Germany

rohr@mpia.de
+49 6221 528347
ecrohr.github.io

Education

Ph.D. Astronomy, 2024; Universität Heidelberg — October 2020-Present
Jellyfish Galaxies as Probes of the Cosmic Gas. 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 at ads.

As a first author:

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 in press..
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. in review: "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. in review: "The heart of galaxy clusters: demographics and physical properties of cool-core and non-cool-core halos in the TNG-Cluster simulation". arXiv.2311.06333.
3. Nelson, D., Pillpeich, A., Ayromlou M. et al. incl. Rohr, E. in review. "Introducing the TNG-Cluster Simulation: overview and physical properties of the gaseous intracluster medium". A&A. arXiv.2311.06338
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 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. Februrary 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. Novevember 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, Massachussetts, USA. Novevember 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. Septempber 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 Maxk 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 Diableretes, 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 Mattter(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 Csomic Dawn Center: "Describing the Galaxy-Halo Size Relation at Cosmic Noon in FIREbox". Copenhagen, Denmark. Februrary 2020.
- **Invited Talk** at the University of Ghent: "Describing the Galaxy-Halo Size Relation at Cosmic Noon in FIREbox". Ghent, Belgium. Februrary 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 taked at the University of Virginia from August 2018-May 2019. **$4,000.**
- *ThinkSwiss Research Scholarship* from the Office of Science, Technology, and Higher Eduacation 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 Wellenfrontanalyzse (Advanced Lab on Wavefront Analysis; FP36) at the University of Heidleberg. 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 Universty of Virginia. Spring 2020.
- **Tutor** for Advanced Placement (AP) Phsyics 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 and A&A. 2022-Present
- Student Representative for the 16th generation of IMPRS-HD students. Fall 2020-Present.
- Member of the Internatational Max Planck Research School Board in Heidelberg. 2022-Present.
- 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 Universty 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)