Laura Lenkić

Universities Space Research Association – Postdoctoral Researcher

NASA Ames Research Center
Moffett Field, CA 94305-001

Research Interests

- Properties of multi−phase ISM in nearby galaxies
- Structure and dynamics of star forming clumps in nearby galaxies
- Radio and infrared emission lines in nearby galaxies
- Cosmic evolution of gas and star formation in galaxies

Education

Oct 2021	**Ph.D. in Astronomy** University of Maryland, College Park, MD *"Gas and Star Formation at the Peak of Cosmic Star Forming Activity"* Advisor: Dr. Alberto Bolatto
Aug 2016	**M.Sc. in Astronomy** Western University, London, ON *"The Ultraviolet and Infrared Star Formation Rates of Compact Group Galaxies: An Expanded Sample"* Advisor: Dr. Sarah Gallagher
Aug 2014	**B.Sc. in Physics** Western University, London, ON *"The Ultraviolet Star Formation Rates of Compact Group Galaxies"* Advisor: Dr. Sarah Gallagher

Professional Experience

Nov 2021−present	**Postdoctoral Researcher, Visiting** SOFIA Science Center, NASA Ames Research Center, Mountain View, CA
2016−2021	**Research Assistant** University of Maryland, College Park, MD
2013−2016	**Research Assistant** Western University, London, ON
Summer 2011	**Research Assistant** Lawson Health Research Institute, London, ON

Observational Experience

ALMA

Cycle 9	**PI**	Uncovering Embedded High-Mass Star Formation Regions in the Metal-Poor Galaxy NGC 6822 – Awarded 12.1 hours

Cycle 9	Co-I	Hidden Gems on a Ring: Resolving Embedded Young Massive Clusters in a Nearby Ringed Galaxy – PI: J. Sun
Cycle 9	Co-I	The early evolution of super star clusters in the nuclear starburst of NGC 4945 – PI: K. Emig
Cycle 9/8/7	Co-I	ACA Mapping of the Largest Supergiant HII Region in the Nearby Universe: 30 Doradus – PI: A. Bolatto
Cycle 8 ACA	Co-I	Complete Molecular Gas Coverage in Nearby Low-Luminosity AGN – PI: R. Levy
Cycle 8	**PI**	Clump Scale Gas Kinematics in the Turbulent, Gas-Rich, Nearby Galaxy DYNAMO D13-5 – Awarded 13.0 hours
Cycle 8	Co-I	A Top-down View of Massive Cluster Formation in a Nuclear Starburst Ring – PI: J. Sun
Cycle 7	**PI**	Confirming Serendipitous High-z Sources in the PHIBSS2 Fields – Awarded 8.7 hours
Cycle 7/6	Co-I	Ionized Gas, Radiation Field, Masses, and Dust Temperature in Forming Massive Clusters in the NGC253 Starburst – PI: R. Levy
Cycle 7	Co-I	A Representative Interferometric Survey of Galaxies in the z=0 Universe with Full IFU Spectroscopic Coverage: EDGE – PI: A. Bolatto

GBT

2021b	Co-I	GBT EDGE: A Representative Survey of the z=0 Universe with Full IFU Spectroscopy – PI: A. Bolatto

JWST

Cycle 1	Co-I	Dissecting the Prototypical Starbursts NGC 253 and M 82 and Their Cool Galactic Winds – PI: A. Bolatto

NOEMA

Summer 2021	Co-I	Dense Molecular Gas in the Outflow of M82 – PI: F. Walter
Winter 2019	**PI**	Confirming Serendipitous High-z Sources in the PHIBSS2 Fields – Awarded 6.0 hours

SOFIA

DDT	Co-I	Investigating the Role of Shocks in the Excitation of [CII] in the Asymmetric Galaxy NGC 2276 – PI: F. Polles
DDT	Co-I	A Complete Picture of the Interstellar Medium and Star Formation in NGC4303 – PI: A. Bolatto
Cycle 9/8	**PI**	Local Analogues of Turbulent, Clumpy, Main-Sequence Galaxies at the Peak of Cosmic Star Formation – Awarded 17.1 hours and $171,000
Cycle 9	Co-I	SOFIA GREAT Mapping of the LMC Northern Molecular Ridge – PI: A. Bolatto

VLA

2022b	Co-I	Recombination Lines from Diffuse Ionized Gas in the M82 Starburst – PI: K. Emig
2022a	Co-I	Diffuse Ionized Gas in the Central Starburst of NGC 253 – PI: K. Emig

Scientific Presentations

Invited Talks

Jun 2023	The 242nd Meeting of the American Astronomical Society	Albuquerque, NM
Nov 2022	Stratospheric Observatory for Infrared Astronomy Colloquium	Moffett Field, CA
Feb 2021	Space Telescope Science Institute Galaxy Journal Club	(Virtual)

Contributed Talks

Jul 2023	New Views on Feedback & the Baryon Cycle in Galaxies	Healesville, Australia
Jan 2023	The 241st Meeting of the American Astronomical Society	Seattle, WA
Jul 2022	The Magellanic Clouds as a Laboratory for Star Formation	Moffett Field, CA
Jun 2022	From Stars to Galaxies II	Gothenburg, Sweden
Jun 2022	Computational Astrophysics in the ngVLA Era	New York, NY
Mar 2022	Our Galactic Ecosystem: Opportunities and Diagnostics in the Infrared	Lake Arrowhead, CA
Apr 2021	Ringberg Virtual Seminar Series	(Virtual)
Jan 2021	The 237th Meeting of the American Astronomical Society	(Virtual)
Jun 2019	Radio/Millimeter Astrophysical Frontiers in the Next Decade	Charlottesville, VA
Nov 2018	ISM Group Lunch Talk at Goddard Space Flight Center	Greenbelt, MD
Sep 2018	Lunch Talk at the National Science Foundation	Alexandria, VA
Jun 2018	Astrophysical Frontiers in the Next Decade and Beyond	Portland, OR
May 2015	Canadian Astronomical Society (CASCA) Annual Meeting	Hamilton, ON

Posters

Jun 2023	The 242nd Meeting of the American Astronomical Society	Albuquerque, NM
Dec 2022	JWST First Science Results	Baltimore, MD
May 2021	ISM 2021 Structure, characteristic scales, and star formation	(Virtual)
Jun 2020	EAS2020 Annual Meeting	(Virtual)

Grants Awarded

2022	$65,000	*Investigating Gas Heating Efficiencies at Low Metallicity in the Magellanic Clouds*	SOFIA/USRA/NASA
2020	$171,000	*Local Analogues of Turbulent, Clumpy, Main-Sequence Galaxies at the Peak of Cosmic Star Formation*	SOFIA/USRA/NASA

Honors and Awards

2016	Gregor and Donat Wentzel Scholarship Awarded by the Graduate Entrance Committee to the most promising applicants for graduate study. Value: 1 at $10,000.	University of Maryland Dept. of Astronomy
2015–2016	Ontario Graduate Scholarship – Honorable Mention The Ontario Graduate Scholarship (OGS) program encourages excellence in graduate studies at publicly-assisted universities in Ontario. Since 1975, the OGS program has been providing merit-based scholarships to Ontario's best graduate students in all disciplines of academic study.	Western University
2014	Western Graduate Scholarship Value: $2,000.	Western University

2009−2010	Nortel Networks Excellence in Computer Science − Declined Awarded annually to a full-time undergraduate student entering first year of the science program who intends to register in the Honors Computer Science program in year 2 and who achieves a 90% admission average. Value: 2 at $2,000 per year.	Western University

Professional Service and Membership

Referee for	Astrophysical Journal
Committee Service	SOFIA Cycle 10 Panel Monitor, 2022 UMD Dept. of Astronomy Graduate Student Council President, 2019–2021 UMD Dept. of Astronomy Equity, Diversity, and Inclusion Committee, 2017–2020 Western University Graduate Student Council Member, 2014–2016
Collaboration Membership	ngVLA Galaxies and Galaxy Evolution Science Working Group, 2022 ALMA 30 Doradus, 2021 DYNAMO, 2020
Society Membership	American Astronomical Society, Full Member Canadian Astronomical Society, Full Member
Meetings Organized	Local Organizing Committee, Great Lakes Quasar Symposium, 2015 Collaboration Meeting Organizing Committee, Western University, 2014

Students Mentored

Emma Kleiner	Summer 2021	Summer Research Internship

Teaching Experience

Spring 2021	**Field Assistant for Eyes on the Sky: The Science of Birdwatching** University of Maryland, College Park, Honors course, Dr. Derek Richardson
Fall 2020	**Teaching Assistant for The Threat of Asteroid Impacts** University of Maryland, College Park, Non-astronomy major course, Dr. Jessica Sunshine
Spring 2020	**Teaching and Lab Assistant for Introduction to Astronomy** University of Maryland, College Park, Non-science major course, Dr. Alberto Bolatto
	Field Assistant for Eyes on the Sky: The Science of Birdwatching University of Maryland, College Park, Honors course, Dr. Derek Richardson
Fall 2019	**Teaching Assistant for General Astronomy** University of Maryland, College Park, Non-science major course, Dr. Drake Deming
Winter 2016	**Teaching and Lab Assistant for Introductory Physics I** Western University, London, B.Sc. course, Dr. Kanthi Kaluarachchi
	Teaching Assistant for Exploring the Stars Hume Cronyn Memorial Observatory, Western University, London, Community Outreach Program, Dr. Margaret Campbell-Brown
Fall 2015	**Teaching Assistant for Physics for Engineering Students I** Western University, London, B.Eng. course, Dr. Silvia Mittler
	Teaching Assistant for General Astronomy Western University, London, B.Sc. course, Dr. Jan Cami
	Teaching Assistant for Exploring the Stars Hume Cronyn Memorial Observatory, Western University, London, Community Outreach Program, Dr. Margaret Campbell-Brown

Summer 2015	**Teaching Assistant for Essentials of Modern Astronomy** Western University, London, B.Sc. course, Dr. Elizabeth A. Silber
2014–2015	**Teaching and Lab Assistant for Introductory Physics I** Western University, London, B.Sc. course, Dr. Kanthi Kaluarachchi
2011–2013	**Private Tutor** London, ON, Grade 11 and 12 Applied Mathematics, Calculus, Physics, and Chemistry

Equity, Diversity, and Inclusion Activities

2020 **GRAD-MAP Winter Workshop Volunteer and Guest Lecturer, University of Maryland**

- Prepared `Jupyter` notebooks for students on image processing basics and exercises with `scikit-image`
- Led an internship application writing workshop
- Helped students finish their work, prepare their presentations, and practice their talks
- Chaperoned students to the National Museum of African American History and Culture
- Engaged with students outside of regularly scheduled workshop activities to talk about research and life in graduate school

2017–2020 **Equity, Diversity, and Inclusion Committee Member, University of Maryland**

- Advocated for the removal of the physics GRE requirement for graduate school applications
- Wrote second year project section in the graduate and advocated for revisions to the second year project to ensure student success
- Authored document on ensuring time away for work for students that is circulated every semester
- Advocated for and helped implement a survey for teaching assistants to evenly distribute work loads
- Helped compile and distribute to the department resources for learning about anti-Black racism

2017–2018 **Junior Leader of Astronomy Gentleladies' Network, University of Maryland**

- Organized monthly meetings for women in physics and astronomy to discuss topics such as impostor syndrome, the physics GRE, graduate school applications, and how to have crucial diversity conversations
- Organized workshops in partnership with the campus health center to talk about mental health in academia and sexual harassment
- Hosted speakers from the Space Telescope Science Institute and NASA Goddard Space Flight Center to learn about science communication and careers at NASA
- Co-organized a mentoring program for women in physics and astronomy
- Organized and hosted bi-weekly tea times to serve as a safe-space for women to socialize and freely discuss experiences

Selected Outreach Experience

2020 **Skype a Scientist Volunteer, Virtual**

- Discussed astronomy grad school and career path with middle school students
- Talked about the solar system and planets with children aged 3 to 5

2012–2016 **Hume Cronyn Memorial Observatory Public Outreach, Western University**

- Participated in weekly summer public nights by helping operate telescopes, managing crowds, answering visitor questions, and creating and presenting public talks, including: *Small Bodies in the Solar System* (2016), *Ground Based Telescopes (but really) A Look at Radio Telescopes* (2015), and *The Perseid Meteor Shower; Plus: The Russian Meteor of February 2013* (2014)
- Participated in organizing and running public events for the Transit of Mercury (2016) and the Transit of Venus (2012) by creating informational posters, answering visitor questions, directing visitors to multiple observing stations and activities, and distributing eclipse sunglasses

2011–2013 **Physics and Astronomy Department Outreach, Western University**

- Performed demonstrations of physics experiments and discussed details of physics and astronomy programs with interested high school students and their parents at yearly University open house
- Presented informational talks about the Physics and Astronomy program at Western University during high school visits (2013)

Professional Experience and Workshops

July 2022	The Magellanic Clouds as a Laboratory for Star Formation: 2022 Team Meeting	Moffett Field, CA
Mar 2021	Science Talk '21	(Virtual)
Mar 2019	ALMA Proposal Workshop	University of Maryland
May 2019	SOFIA Guest Observer	Palmdale, CA
Dec 2015	Canada and the Square Kilometre Array	Toronto, ON
Aug 2015	ALMA Summer School on Interferometric Techniques	DRAO

List of Publications

Link to current publications in ADS
Total: 14 papers — 125 citations — h-index: 7

14. Jones, O. C., Nally, C., Habel, N., **Lenkić, L.**, Fahrion, K., Hirschauer, A. S., Chu, L. E. U., Meixner, M., De Marchi, G., Nayak, O., Robberto, M., Sabbi, E., Zeidler, P., Alves de Oliveira, C., Beck, T., Biazzo, K., Brandl, B., Giardino, G., Jerabkova, T., Keyes, C., Muzerolle, J., Panagia, N., Pontoppidan, K., Rogers, C., M., Sargent, B. A., Soderblom, D. R. 2023, NatAs, 7, 694, *"Discovery of Dusty Sub-Solar Young Stellar Objects in NGC 346 with JWST/NIRCam"*

13. Larsson, J., Fransson, C., Sargent, B., Jones, O. C., Barlow, M. J., Bouchet, P., Meixner, M., Blommaert, J. A. D. L., Coulais, A., Fox, O. D., Glasse A., Gastaud, R., Habel, N., Hjorth, J., Hirschauer, A. S., Kavanagh, P. J., Lau, R. M., **Lenkić, L.,** Nayak, O., Rest, A., Temim, T., Tikkanen, T., Wright, G. S., Wesson, R. 2023, ApJ, 949, 27, *"JWST NIRSpec observations of Supernova 1987A – from the inner ejecta to the reverse shock"*

12. **Lenkić, L.,** Bolatto, A. D., Fisher, D. B., Abraham, R., Glazebrook, K., Levy, R. C., Obreschkow, D., Volpert, C. G. 2023, ApJ, 945, 9, *"CO Excitation in High−z Main Sequence Analogues: Resolved CO(4−3)/CO(3−2) Line Ratios in DYNAMO Galaxies"*

11. Reichardt Chu, B., Fisher, D. B., Bolatto, A. D., Chisholm, J., Fielding, D., Berg, D., Cameron, A. J., Glazebrook, K., Herrera-Camus, R., Kacprzak, G. G., **Lenkić, L.,** Li, M., McPherson, D. K., Nielsen, N. M., Obreschkow, D., Rickards Vaught, R. J., Sandstrom, K. 2022, ApJ, 941, 163, *"DUVET: Spatially Resolved Observation of Star Formation Regulation via Galactic Winds in a Turbulent Disk Galaxy"*

10. Levy, R. C., Bolatto, A. D., Leroy, A. K., Sormani, M. C., Emig, K. L., Gorski, M., **Lenkić, L.,** Mills, E. A. C., Tarantino, E., Teuben, P., Veilleux, S., Walter, F. 2022, ApJ, 935, 19, *"The Morpho-Kinematic Architecture of Super Star Clusters in the Center of NGC 253"*

9. Ambachew, L., Fisher, D. B., Glazebrook, K., Girard, M., Obreschkow, D., Abraham, R., Bolatto, A. D., **Lenkić, L.,** Damjanov, I. 2022, MNRAS, 512, 3079, *"Stellar Masses of Clumps in Gas-rich, Turbulent Disk Galaxies"*

8. Cooke, L., Levy, R. C., Bolatto, A. D., Simon, J. D., Newman, A. B., Teuben, P., Davey, B. D., Wright, M., Tarantino, E., **Lenkić, L.,** Villanueva, V. 2022, MNRAS, 512, 1012, *"Cuspy Dark Matter Density Profiles in Massive Dwarf Galaxies"*

7. Bolatto, A. D., Leroy, A. K., Levy, R. C., Meier, D. S., Mills, E. A. C., Thompson, T. A., Emig, K. L., Veilleux, S., Ott, J., Gorski, M., Walter, F., López, L. A., **Lenkić, L.** 2021, ApJ, 923, 83, *"ALMA Imaging of a Galactic Molecular Outflow in NGC 4945"*

6. **Lenkić, L.,** Bolatto, A. D., Fisher, D. B., Glazebrook, K., Obreschkow, D., Abraham, R., Ambachew, L. 2021, MNRAS, 506, 3916, *"Giant Star Forming Complexes in High-z Main Sequence Galaxy Analogues: The Internal Structure of Clumps in DYNAMO Galaxies"*

5. Levy, R. C., Bolatto, A. D., Leroy, A. K., Emig, K. L., Gorski, M., Krieger, N., **Lenkić, L.,**, Meier, D. S., Mills, E. A. C., Ott, J., Rosolowsky, E., Tarantino, E., Veilleux, S., Walter, F., Weiss, A., Zwaan, M. A. 2021, ApJ, 912, 4 *"Outflows from Super Star Clusters in the Central Starburst of NGC 253"*

4. Girard, M., Fisher, D. B., Bolatto, A. D., Abraham, R., Bassett, R., Glazebrook, K., Herrera-Camus, R., Jiménez, E., **Lenkić, L.,**, Obreschkow, D. 2021, ApJ, 909, 12 *"Systematic Difference Between Ionized and Molecular Gas Velocity Dispersion in $z \sim 1-2$ Disks and Local Analogues"*

3. **Lenkić, L.,** Bolatto, A. D., Förster Schreiber, N. M., Tacconi, L. J., Neri, R., Combes, F., Walter, F., García-Burillo, S., Genzel, R., Lutz, D., Cooper, M. C. 2020, AJ, 159, 190 *"Plateau de Bure High-z Blue Sequence Survey 2 (PHIBSS2): Search for Secondary Sources, CO Luminosity Functions in the Field, and the Evolution of Molecular Gas Density through Cosmic Time"*

2. **Lenkić, L.,** Tzanavaris, P., Gallagher, S. C., Desjardins, T. D., Walker, L. M., Johnson, K. E., Fedotov, K., Charlton, J., Hornschemeier, A. E., Durrell, P. R., Gronwall, C. 2016, MNRAS, 459, 2948 *"The Ultraviolet and Infrared Star Formation Rates of Compact Group Galaxies: An Expanded Sample"*

1. Tzanavaris, P., Hornschemeier, A. E., Gallagher, S. C., **Lenkić, L.,** Desjardins, T. D., Walker, L. M., Johnson, K. E., Mulchaey, J. S. 2016, ApJ, 817, 95 *"Exploring X-Ray Binary Populations in Compact Group Galaxies with Chandra"*

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