

MONICA VALLURI – CURRICULUM VITAE

University of Michigan
Department of Astronomy
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Dated: April 12, 2022

EDUCATION

- Integrated BS. & MS. Physics:** Birla Institute of Technology and Science, Pilani, India, 1983-1987
- Ph.D. Astrophysics:** Indian Institute of Science, Bangalore, India, (December 1993), Advisor: Chanda J. Jog

CURRENT RESEARCH AREAS

- Accurately measuring the masses of supermassive black holes from stellar dynamics, especially in active “reverberation mapping” and barred galaxies.
- Understanding the properties of rotating triaxial systems and barred galaxies with supermassive black holes (SMBH) and the effects of bars on the growth of SMBH and the structure of galactic nuclei.
- Characterizing the shapes and orbital structure of dark matter halos, via simulations and the dynamics of halo stars in the Milky Way Galaxy.

APPOINTMENTS

- 2021-** *Associate Director*, Michigan Institute for Computational Design and Engineering.
- 2017-** *Research Professor*, Department of Astronomy, University of Michigan.
- 2009-** *Intermittent Lecturer*, Department of Astronomy, University of Michigan.
- 2011–17** *Associate Research Professor*, Department of Astronomy, University of Michigan.
- 2007–11** *Assistant Research Scientist*, Department of Astronomy, University of Michigan.
- 2002–07** *Assistant Director*, Kavli Institute for Cosmological Physics, University of Chicago.
- 2001–07** *Senior Research Associate*, Department of Astronomy & Astrophysics, University of Chicago.
- 1999–01** *Research Scientist*, Department of Astronomy & Astrophysics, University of Chicago.
- 1996–99** *Postdoctoral Research Associate*, Rutgers University, NJ
- 1994–96** *Postdoctoral Research Associate*, Columbia University, NY
- 1/1994–10/1994** *Postdoctoral Scholar*, Inter-University Center for Astronomy and Astrophysics, Pune, India.

VISITING POSITIONS –

- Jun–Jul 2006** *Member* Kavli Institute for Theoretical Physics, UCSB, CA
- Jun–Jul 2000** *Visiting Scientist* University of Marseilles, France

Nov 1999 Visiting Professor University of La Plata, Argentina

Jan–Apr 1995 Visiting Scientist Institute of Astronomy, Cambridge University

PROFESSIONAL ASSOCIATION MEMBERSHIP

- 1993–** Astronomical Society of India (Lifetime member)
1996– American Astronomical Society (AAS)
2005– Division of Dynamical Astronomy, AAS
2012– International Astronomical Union (IAU)
2012– High Energy Astrophysics Division, AAS

GRANTS AND AWARDS

- 2023-2026** JWST Cycle I Guest Observer proposal “*Do black holes come in small packages?: A census of black holes in compact stellar systems in the Virgo cluster*” (**Co-I, US-PI, M. Valluri**), (PI - M. Taylor)
- 2023-2026** HST Cycle 29 “*High-resolution ACS/WFC Imaging of Compact Stellar Systems in the Virgo Cluster in Support of JWST Cycle 1 Science*” (**Co-I, US-PI, M. Valluri**), (PI - M. Taylor)
- 2020-2023** National Science Foundation, Astronomy and Astrophysics Grants: “*Raising the bar for black hole mass measurement in lower mass galaxies*” (**PI - M. Valluri**)
- 2020-2023** NASA, Astrophysics Theory grant: “*Exploring the nature of dark matter with Gaia*” (**PI - M. Valluri**)
- 2019-2021** Michigan Institute for Computational Engineering and Design (MICDE) Catalyst grant “*Determining the 3D shape of Milky Way’s Dark Matter Halo*”, (**PI - M. Valluri**)
- 2018-2023** JWST Early Release Science Proposal (STScI) “*Nuclear Dynamics of a Nearby Seyfert with NIRSpec Integral Field Spectroscopy*”, (**Co-I - M. Valluri**, PI- M. Bentz)
- October 2016** University of Michigan, Research Faculty Achievement Award
- 2015-2019** NSF, Astronomy and Astrophysics Grants: “*Black holes in barred galaxies: the Rosetta stones of secular galaxy evolution*”, (**PI - M. Valluri**)
- 2015-2019** NASA, Astrophysics Theory grant: “*Self-consistent dynamical modeling of the Milky Way halo with stellar orbits*”, (**PI - M. Valluri**)
- 2014-2018** HST Cycle 22 Theory Grant: “*Quantifying the Bias in the Masses of Supermassive Black Holes in Barred Galaxies*”, (**PI - M. Valluri**)
- 2012-2013** Elizabeth Crosby Award: University of Michigan, (**PI - M. Valluri**)
- 2009-2013** NSF-Astronomy and Astrophysics Grant: “*The dynamics of rotating triaxial galaxies with massive black holes*”, (**PI - M. Valluri**)
- 2006-2008** HST Cycle 15 Archival Research Grant: “*Resolving the Critical Ambiguities of the M-sigma relation*” (PI - D. Bacheldor), **Co-PI, M. Valluri**
- 2002-2005** HST Cycle 11 General Observer Grant: “*Nuclear dynamics of NGC 205*”, (PI - L. Ferrarese).
- 2000-2003** HST Cycle 9 Archival Research Grant: “*Kinematics of nuclear stellar disks around massive central black holes*” , (**PI - M. Valluri**)
- 2000-2003** NASA Astrophysics Theory (ATP) Grant: “*Origin and evolution of massive black holes in galaxies*” (PI - D. Merritt, **Co-PI, M. Valluri**)
- 2000-2003** NSF -Astronomy & Astrophysics Grant: “*Black holes and galaxy evo-*

lution" (PI - D. Merritt), **Co-PI, M. Valluri**

1992 (Indian) Council for Scientific & Industrial Research (CSIR) International Travel Fellowship

1987-1993 Indian Institute of Science - University Grants Commission (INDIA) Graduate Research Fellowship.

INVITED TALKS AND COLLOQUIA IN THE PAST FEW YEARS

2021, Dec 9: NASA Cosmic Origins, Stars interest Group, online talk "The DESI Milky Way Survey"

2020, Oct 21: Michigan Center for Applied and Interdisciplinary Mathematics Colloquium: "The Dynamical Inference of the Properties of Dark Matter Halos"

2020, April 9: MICDE Annual Symposium, talk title "Probing the nature of dark matter by modeling the Milky Way"

2019, April 5: KITP Conference The Milky Way in Disequilibrium, talk title "Using Tidal Streams to Investigate the Rotation of the Milky Way's Dark Matter Halo"

2018, October 29: TAP Colloquium University of Arizona, "Barred galaxies and supermassive black hole scaling relations" (Available on You-Tube: https://youtu.be/cUwMIKwE_aY)

2018, January 23: Invited talk at conference "Galaxy evolution and dynamical structures", IUCAA Pune, India, January 22-25th 2018; "New insights in the dynamical structure of bars and boxy peanut bulges"

2018, January 24: Concluding conference summary talk at "Galaxy evolution and dynamical structures", IUCAA Pune, India, January 22-25th 2018

2016, November 30: Department of Astronomy, Case Western Reserve University, Cleveland OH, Colloquium

2016, August 8-12: COSMO16, Invited Plenary talk on orbital structure of dark matter halos, Ann Arbor Michigan

2016, February 18: University of Toledo, Department of Physics and Astronomy, Colloquium

2015, December 1: Georgia State University, Department of Physics and Astronomy, Colloquium

2015, August 10: International Astronomical Union, Division A, Invited talk "Using accurate phase space coordinates of halo field stars to constrain the Milky Way Halo"

2015, June 3: Local Group Astrostatistics Conference, Ann Arbor Michigan, Invited talk "Orbital frequency analysis as a tool for characterizing the phase space structure of galaxies"

2014, April 29: Division of Dynamical Astronomy, 45th Meeting, Philadelphia PA, Invited talk "Dynamical and kinematic structure of bars with supermassive black holes"

2014, March 14: University of Surrey, Guildford UK, Department of Physics and Astronomy, Colloquium

2014, March 5: University of Leicester, Leicester, UK, Department of Physics and Astronomy, Colloquium

2014, January 14: Michigan State University, Department of Physics and Astronomy, Colloquium

- 2013, June 24:** “Galaxies within the comic web” Conference, Kavli Institute for Cosmological Physics
- 2012, July 10:** European Southern Observatory, Garching, Germany, Colloquium
- 2012, April 18:** Columbia University, New York, NY, Department of Astronomy, Colloquium

TEACHING

(* indicates courses developed)

- Summer school on galactic dynamics:** Lectures on orbits in gravitational potentials and use of frequency analysis for understanding potentials at Galactic Dynamics summer school, June 25-30 2019, Shanghai, China.
- Galaxies:** (Astro 404) Upper level galaxies class for astronomy majors, Winter 2019
- Black Holes: Illuminating the Abyss ***: for Michigan Math and Science Scholars (2 week camp for high school students), Summer 2015, Summer 2017, Summer 2021.
- Black Holes: The triumph of gravity:** (Astro 206), University of Michigan, Winter 2015, Winter 2016, Winter 2020, Winter 2021.
- New Discoveries in Astronomy *:** (Astro 220/420) University of Michigan, Winter 2012, Fall 2013, Fall 2014.
- Space and Earth Science for Elementary School Educators*:** (Earth/Astro 255) University of Michigan, Fall 2013, Fall 2014, Fall 2015.
- Climbing the Distance Ladder – How astronomers survey the Universe:** for Michigan Math and Science Scholars Summers (2 week camp for high school students), 2010-2012, 2014, 65 contact hours each summer.
- The structure and content of galaxies:** (Astro 533) Graduate class, University of Michigan (co-taught with E. Bell), Fall 2010.
- Introductory Astronomy–Stars, Galaxies and the Universe:** (Astro 102) Summer 2009, University of Michigan.
- Mathematics for Business Analysis:** (Business 36101), mathematics for pre-admits to business school, Spring 2000, Spring 2001, Winter 2002, Booth School of Business, University of Chicago.
- Dynamics and Structure of Elliptical Galaxies*:** mini-course 6 lectures for graduate students at University of La Plata, Argentina.

GRADUATE STUDENTS SUPERVISED OR CO-ADVISED

- 2005-2007** I. M.Vass (University of Florida, Gainesville & University of Chicago, following the death of her advisor H. Kandrup).
- 2003-2008** J. M. Siegal-Gaskins (University of Chicago, student of Angela Olinto).
- 2013-2018** Klaudia Kowalczyk (Copernicus Institute, University of Warsaw, Poland, co-advised student of Ewa Lokas
- 2019-** Youjia Wu, University of Michigan, Department of Physics, co-advised with K. Freese (University of Texas, Austin).
- 2021-** Neil Ash, University of Michigan, Department of Astronomy.

POSTDOCS SUPERVISED/MENTORED

- 2013-2017** Dr. Sarah R. Loebman (Now Assistant Professor at University of Cal-

ifornia, Merced)

2016–2019 Dr. Kohei Hattori (Now Assistant Professor at National Astronomical Observatory of Japan)

2017–2018 Dr. Leandro Beraldo e Silva

2018–2021 Dr. Khyati Malhan (Now postdoc Max Planck Institute for Astronomy, Heidelberg)

2018–2021 Dr. Pablo Fernandez de Salas (Now industry)

2021- Dr. Leandro Beraldo e Silva

PHD DISSERTATION/THESIS EXAMINATION COMMITTEE MEMBER

2007 Ileana M.Vass, PhD. Astronomy, University of Florida

2011 Cosmin Illie, PhD. Physics, University of Michigan

2013 Klaudia Kowalczyk, PhD. Physics, (Copernicus Institute, University of Warsaw, Poland)

2015 Colin Slater, PhD. Astronomy, University of Michigan

2017 Vivienne Baldassare, PhD. (Astronomy), University of Michigan

2017 Meghan Spencer, PhD. (Astronomy), University of Michigan

2019 Caroline Roberts, PhD. (Astronomy), Georgia State University

2020 Adam Smercina, PhD. (Astronomy), University of Michigan

2020 Yingyi Song, PhD. (Astronomy), University of Michigan

2021 Adriano Poci, PhD. (Astrophysics), Macquarie University, Australia

UNDERGRADUATES AND POST BACCALAUREATE SUPERVISED SINCE 2008

- 26.** Shashank Dattathri (University of Michigan, postbac: Sep. 2021-Jun 2022)
- 25.** Vance Wheeler (University of Michigan, May 2019–Dec 2020, postbac: Jan 2021-May 2022)
- 24.** Rebecca Guilfoyle (University of Michigan, Sep 2019–May 2021)
- 23.** Tanvi Deshmukh (University of Michigan, Jan 2019–Sep. 2021)
- 22.** Joseph Hofer (University of Michigan, Sep. 2017–Aug. 2018)
- 21.** Nabeel Reheemtulla (University of Michigan, Sep. 2017–Aug. 2021, postbac: Aug 2021-)
- 20.** Brendan Massey (University of Michigan, Sep. 2017-Apr 2019)
- 19.** Sarah Snyder (University of Michigan, May 2016–Jun 2018)
- 18.** Brendan Reed (University of Michigan, May 2016–2017)
- 17.** Benjamin Dittenber (University of Michigan, 2015–2017)
- 16.** Erika Greenfelder (University of Michigan, May–Aug 2016)
- 15.** Caleb Abbott (University of Michigan, 2014-2016)
- 14.** Mitchell Worner (University of Michigan, 2012-2013)
- 13.** Kaitlyn Frank (University of Michigan, 2012-2013)
- 12.** Kyle Hinton (University of Michigan, Fall 2012)
- 11.** Austin Yarger (University of Michigan, Winter 2012)
- 10.** David Thompson (University of Michigan, 2011-2012)
- 9.** Samsul Hoque (University of Michigan, 2011-2012)
- 8.** Amlan Nayak (University of Michigan, 2011-2012)
- 7.** Jon Brown (University of Michigan, 2011-2013), now astro postdoc UC Santa Cruz.
- 6.** Alex Khoriarty (University of Michigan, Fall 2010)

5. Evan Fletcher (University of Michigan, 2010-2011)
4. Yiija Tang (University of Michigan, 2010-2011)
3. Nicholas Crnjanski (University of Michigan, Fall 2009)
2. Annalyn Ng (University of Michigan, Summer 2009)
1. Alex Deibel (University of Michigan, 2008-2010), now astro lecturer U. Indiana.

SELECTED SERVICE

- 2021** NASA Review Panel
- 2020-** Co-Chair, Dark Energy Spectroscopic Instrument (DESI) Milky Way Survey Working Group
- 2020-2021** Member, Department of Astronomy, Graduate Prelim Exam committee
- 2020** NSF proposal review panel.
- 2018-2019** Co-Chair of SOC for IAU Symposium 353 “Galactic Dynamics in the Era of Large Surveys”, Shanghai China, July 1-5, 2019
- 2018-2019** Co-Chair of Galactic Dynamics Summer School organized in Shaghai Jiao Tong University, June 24-28 2019
- 2017-2019** UM Office of Research Committee for selecting “Distinguished Research Faculty” awardees
- 2017-2018** Department of Astronomy, Graduate Prelim Exam committee
- 2017-2018** Referee, Research Corporation for Science Advancement
- 2017** NASA proposal review panel (Chair)
- 2016-2017** Department of Astronomy, Graduate Admissions committee
- Oct 2016** Scientific organizing committee member “Testing Dark Matter in the era of Gaia”, NORDITA workshop
- 2016-2017** Chair, Division of Dynamical Astronomy, American Astronomical Society (Elected position)
- 2015-2016** Vice Chair, Division of Dynamical Astronomy, American Astronomical Society (Elected position)
- Jun. 2015** Scientific Organizing committee member “Local Group Astro Statistics”
- 2014-2021** Founder and Organizer of “Conversations on Equity and Inclusion in Astrophysics” (2-3 talks/discussions per semester at U. Michigan)
- Jul.-Aug. 2013** Lead Organizer, Aspen Center for Physics Summer Workshop “The Milky Way: A Laboratory for Galaxy Formation”
- Nov. 2011-January 2013** Member of Department of Astronomy ad hoc committee to prepare proposal and formulate guidelines for “Michigan Institute of Astrophysical Research” (Chair: Eric F. Bell). I was asked to serve on this committee because of my 5 years of experience as the Assistant Director of the Kavli Institute for Cosmological Physics at University of Chicago
- 2013-2015** Member of Department of Astronomy undergraduate curriculum committee (Chair: Sally Oey)
- Aug. 2011** Co-organizer MCTP work shop “Double and Single Black Holes in Galaxies”, Ann Arbor MI
- 2009-2011** Division Committee Member, Division of Dynamical Astronomy, American Astronomical Society (Elected position)

- 2005** Co-organizer, International conference “New Views of the Universe: KICP Inaugural Symposium in honor of David Schramm”, December 2005
- 2005–2007** Member, University of Chicago, Women in Physical Sciences Committee
- 2005–2007** Coordinator, Women in Astronomy and Physics (WAP) support group, University of Chicago
- 2005** Member UChicago Team, Center for Integration of Research Teaching and Learning (CIRTL, UWisconsin) conference on “Achieving Diversity in STEM disciplines”, Univ. of Wisconsin, Madison
- 2000–** Proposal reviewer for: NSF (Division of Astronomical Sciences); NASA (ATP, ADAP, LTSA), HST, Gemini, LLNL Computational Grand Challenge, NASA Postdoctoral Fellowship Program
- 1998** Chairperson, Local Organizing Committee for conference “Galaxy Dynamics”, Rutgers University. Co-editor of the conference proceedings published by the Astronomical Society of the Pacific (ASP)
- 1994–** Current referee for: The Astrophysical Journal (ApJ) and Astrophysical Journal Letters (ApJL), The Astronomical Journal (AJ), Monthly Notices of the Royal Astronomical Society (MNRAS), Astronomy & Astrophysics (A&A), Astrophysics and Space Science (ApSS); Journal of Cosmology and Astroparticle Physics (JCAP), Journal of Astronomy & Astrophysics (Indian Academy of Sciences); Publications of the Astronomical Society of Australia, Publications of the Astronomical Society of Japan

BIBLIOGRAPHY

CITATION STATISTICS

h-index: 32 (Harvard ADS), 35 (Google Scholar)
 Total number of citations > 4,000

CONFERENCE PROCEEDINGS EDITED

1. **Galaxy Dynamics - A Rutgers Symposium**, 1999, Editors: D. R., Merritt, J. A., Sellwood, & M., Valluri 1999. Astronomical Society of the Pacific Conf. Ser. 182
2. **Galactic Dynamics in the Era of Large Surveys, Proceedings of IAU Symposium 353**, 2020, held in Shanghai, Peoples Republic of China, July 1-5, 2019, Editors: M. Valluri & J. A., Sellwood, Cambridge University Press. DOI: 10.1017/S1743921320000964

ARTICLES IN REFEREEED JOURNALS

72. Malhan, K., **Valluri, M.**, Freese, K., Ibata, R. A. 2022. “New constraints on the dark matter density profiles of dwarf galaxies from proper motions of globular cluster streams”. MNRAS (under review) e-print arXiv:2201.03571
71. Roier, G. R. H. and 16 colleagues (including **M. Valluri**) 2022. “Gas inflows in the polar ring of NGC 4111: the birth of an AGN.” MNRAS, 512, 2556 e-print arXiv:2203.02532, 642/tmp. doi:10.1093/mnras/stac634
70. Rehemtulla, N., **Valluri, M.**, Vasiliev, E. 2022. “Non-parametric spherical Jeans mass estimation with B-splines.” MNRAS 511, 5536. e-print/arXiv:2202.05440, doi:10.1093/mnras/stac400

69. Wu, Y., **Valluri, M.**, Panithanpaisal, N., Sanderson, R., Freese, K., Wetzel, A., Sharma, S. 2022 “Using Action Space Clustering to Constrain the Accretion History of Milky Way like Galaxies” arxiv e-print, arXiv:210408185, MNRAS 509, 5882.
68. Roberts, C. A., Bentz, M. C., Vasiliev, E., Valluri, M., 2021 “The Black Hole Mass of NGC 4151 from Stellar Dynamical Modeling”, arxiv e-print, arXiv:210602758, ApJ, 916, 25.
67. Hattori, K. **Valluri, M.**, Vasiliev, E. 2021, “Action-based distribution function modelling for constraining the shape of the Galactic dark matter halo”, arxiv e-print, arXiv:2012.03908, MNRAS, 508, 5468.
66. Bentz, M. C., Williams, P. R., Street, R., Onken, C. A., **Valluri, M.**, Treu, T. 2021. A Detailed View of the Broad-line Region in NGC 3783 from Velocity-resolved Reverberation Mapping.” ApJ, 920, 112
65. Malbet, F. and 85 colleagues (including MV) 2021. “Faint objects in motion: the new frontier of high precision astrometry.” Experimental Astronomy 51, 845?886.
64. **Valluri, M.**, Price-Whelan, A., & Snyder, S. J. 2021, “Detecting the Figure Rotation of Dark Matter Halos with Tidal Streams”, arXiv e-prints, arXiv:2009.09004, ApJ, 910, 150.
63. Malhan, K., **Valluri, M.**, & Freese, K. 2021, “Probing the Nature of Dark Matter with Accreted Globular Cluster Streams”, MNRAS, 501, 179
62. Bentz, M. C., Street, R., Onken, C. A. & **Valluri, M.** 2021, “Robotic Reverberation Mapping of the southern Seyfert galaxy NGC 3783”, ApJ , 906, 50
61. Vasiliev, E., & **Valluri, M.** 2020, “A New Implementation of the Schwarzschild Method for Constructing Observationally Driven Dynamical Models of Galaxies of All Morphological Types” ApJ, 889, 39
60. Bentz, M. C., Ferrarese, L. Onken, C. A., Peterson,B. M., **Valluri, M.** 2019 “A Cepheid Distance to NGC 6814”, ApJ, 885, 161
59. de Salas, P. F., Malhan, K., Freese, K., Hattori, K., **Valluri, M.** 2019. “On the estimation of the Local Dark Matter Density using the rotation curve of the Milky Way.”, JCAP, 2019, 037
58. Wu, Y., Freese, K., Kelso, C., Stengel, P., **Valluri, M.** 2019. “Uncertainties in Direct Dark Matter Detection in Light of Gaia.” JCAP 2019, 034.
57. Malhan, K., Ibata, R. A., Carlberg, R. G., **Valluri, M.**, Freese, K. 2019. “Butterfly in a Cocoon, Understanding the origin and morphology of Globular Cluster Streams: The case of GD-1.” arXiv e-prints arXiv:1903.08141.
56. Hattori, K., **Valluri, M.**, Castro, N., Roederer, I. U., Mahler, G., Khullar, G. 2019. “Origin of a Massive Hyper-runaway Subgiant Star LAMOST-HVS1: Implication from Gaia and Follow-up Spectroscopy.” ApJ, 873, 116.
55. Beraldo e Silva, L., de Siqueira Pedra, W., **Valluri, M.**, 2019, “The discreteness driven relaxation of collisionless gravitating systems: entropy evolution and the Nyquist-Shannon Theorem”, ApJ, 872, 20

54. Beraldo e Silva, L., de Siqueira Pedra, W., **Valluri, M.**, Sodré, L. Bru, J-B., 2018, “The discreteness-driven relaxation of collisionless gravitating systems: entropy evolution in fixed external potentials, N-dependence and the role of chaos”, ApJ, 870, 128, arXiv:1811.00646
53. Hattori, Kohei, **Valluri, M.** Castro, N. Roederer, I. U., Mahler, G., Khullar, G. 2019, “Origin of a massive hyper-runaway subgiant star LAMOST-HVS1 – implication from Gaia and follow-up spectroscopy”, ApJ, 873, 116, arXiv:181002029.
52. Kowalczyk, K, del Pino, A., Lokas, E.L, **Valluri, M.**, 2018, “ Schwarzschild dynamical model of the Fornax dwarf spheroidal galaxy”, MNRAS, 482, 524.
51. Roederer, I. U. Hattori, K., **Valluri, M.**, “Kinematics of Highly r-process-enhanced Field Stars: Evidence for an Accretion Origin and Detection of Several Groups from Disrupted Satellites”, 2018, AJ, 156,179.
50. Hattori, K., **Valluri, M.**, Bell, E., & Roederer, I. U. 2018, “Old, Metal-Poor Extreme Velocity Stars in the Solar Neighborhood”, ApJ 866, 121, (arXiv:180503194).
49. Hattori, K., **Valluri, M.**, & Castro, N. 2018 “Constraining Solar position and velocity with a Nearby Hypervelocity Star”, ApJ, 869, 33, (arXiv:180408590).
48. Kowalczyk, K., Lokas, E. L. & **Valluri, M.** 2018, “The effect of non-sphericity on mass and anisotropy measurements in dSph galaxies with Schwarzschild method”, MNRAS, 476, 2918, (arXiv:1708.09425).
47. Loebman, S. R., **Valluri, M.**, Hattori, K., Debattista, V. P., Bell, E., Stinson, G., Christensen, C., Brooks, A., Quinn, T. R., Governato, F., 2018, “Beta dips in the Gaia Era: Simulation predictions of galactic velocity anisotropy parameter beta for halo stars”, ApJ, 853, 196, (arXiv:1704.06264).
46. Hattori, K., **Valluri, M.**, Loebman, S. R., Bell, E. 2017, “Reliability of the measured velocity anisotropy of Milky Way stellar halo” ApJ, 841, 91, (arXiv:1704.06286).
45. Kowalczyk, K., Lokas, E. L. & **Valluri, M.**, 2017,“Recovering the mass profile and orbit anisotropy of mock dwarf galaxies with Schwarzschild modelling”, MNRAS, 470, 3959 (arXiv:1702.06065).
44. Abbott, C. G., **Valluri, M.**, Shen, J., Debattista, V. P., 2017, “On the orbits that generate X-shapes and box-peanut bulges”, MNRAS, 470, 1526 (arXiv:1703.07366).
43. Kelso, C., Savage, C., **Valluri, M.**, Freese, K., Stinson, G. S.; Bailin, J., 2016, “The impact of baryons on the direct detection of dark matter”, JCAP, 08, 071 (arXiv:1601.04725).
42. Roederer, I. U., Mateo, M., Bailey, J., Song, Y., Bell, E. F., Crane, J. D., Loebman, S. R., Nidever, D. L., Olszewski, E. W.; Sheetman, S. A., Thompson, I. B., **Valluri, M.**, Walker, M. G., 2016, “Detailed chemical abundances in the *r*-process-rich ultra-faint dwarf galaxy Reticulum 2”, A.J., 151, 82 (arXiv:1601.04070).
41. **Valluri, M.**, Shen, J., Abbott, C. & Debattista, V. P., 2016 “A unified view of the orbital structure of bars and triaxial ellipsoids”, ApJ, 818, 141 (arXiv:1512.03467).
40. Loebman, S. R., Debattista, V. P., Nidever, D. L., Hayden, M. R. Holtzman, J. A., Clarke, A. J., Roskar, R. **Valluri, M.**, 2016 “Imprints of radial migration on the Milky Way’s metallicity distribution functions”, ApJ Letters, 181, 6, (arXiv:1511.06369).

39. Freese, K., Rindler-Daller, T., Spolyar, D. & **Valluri, M.**, 2016, “Darks Stars: A review” invited review, Reports on Progress in Physics, 79, Issue 6, 066902 (arXiv:1501.02394).
38. Snaith, O., Bailin, J. A., Gibson, B., Bell, E. F., Stinson, G. S., **Valluri, M.**, Wadsley, J., 2016 “The history of stellar metallicity in a simulated disc galaxy”, MNRAS, 456, 3119 (arXiv:1512.02680).
37. Price-Whelen, A., Johnston, K. V., **Valluri, M.**, Pearson, S., Kupper, A. H. W., Hogg, D. W., 2016, “Chaotic dispersal of tidal debris”, MNRAS, 455, 1079 (arXiv:1507.08662)
36. Lokas, E. L., Athanassoula, E., Debattista, V. P., **Valluri, M.**, del Pino, A., Semczuk, M., Gajda, G., Kowalczyk, K., 2014, “Adventures of a tidally induced dwarf”, MNRAS, 445, 1339 (arXiv:1404.1211)
35. Onken, C. A., **Valluri, M.**, Brown, J. S. et al., 2014, “The Black Hole Mass of NGC 4151. II. Stellar Dynamical Measurement from Near-Infrared Integral-Field Spectroscopy”, ApJ, 791, 37 (arXiv:1406.6735)
34. Peterson, B. et al. (45 co-authors), 2014, “Reverberation mapping of the Seyfert 1 galaxy NGC 7469”, ApJ, 795, 149 (arXiv:1409.4448)
33. Baldassare, V., Gallo, E., Miller, B. P., Plotkin, R. M., Treu, T., **Valluri, M.**, Woo, J-H., 2014, “AMUSE-Field II: Nucleation of early-type galaxies in the field vs. cluster environment”, ApJ, 791, 133 (arXiv:1406.6697)
32. Hartmann, M., Debattista, V. P., Cole, D., **Valluri, M.**, Widrow, L., Shen, J., 2013, “The effect of bars on the $M_{bh} - \sigma$ relation: offset, scatter and residuals correlations”, MNRAS, 441, 1243 (arXiv:1309.2634)
31. Bailin, J., Bell, E. F., **Valluri, M.**, Stinson, G. S., Debattista, V. P., Couchman, H. M. P & Wadsley, J., 2014, “Systematic problems with stellar halo models”, ApJ, 783, 95 (arXiv:1401.5489)
30. Brown, J. S., **Valluri, M.**, Shen, J. & Debattista, V.P., 2013, “On the off-set of barred galaxies from the black hole $M_{bh} - \sigma$ relation”, ApJ, 778, 151 (arXiv:1305.5265)
29. Debattista, V. P., Roskar, R. **Valluri, M.**, Quinn, T. R. Moore, B. & Wadsley, J., 2013, “What’s up in the Milky Way? On the orientation of the disc relative to the triaxial halo”, MNRAS, 434, 297 (arXiv:1301.2760)
28. Batcheldor, D., Axon, D. **Valluri, M.** et al., 2013, “A STIS atlas of CaII absorption line kinematics in galactic nuclei”, AJ 146, 67 (arXiv:1308.1983)
27. **Valluri, M.**, Debattista, V. P., Stinson, G. S., Bailin, J., Quinn, T. R., Couchman, H. M. P. Wadsley, J., 2013, “Halo orbits in cosmological disk galaxies: tracers of formation history”, ApJ, 767, 93 (arXiv:1301.4517)
26. Grier, C. J., et al., 2013, “The Structure of the broad line region in AGN: I. reconstructed velocity-delay maps”, ApJ, 764, 47 (arXiv:1210.2397)
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