

Dr. Katarina (Dida) Marković: *Curriculum Vitae*

CONTACT INFORMATION	Jet Propulsion Laboratory M/S 169-237, 4800 Oak Grove Drive Pasadena, CA 91109, USA	<i>E-mail:</i> markovic@jpl.nasa.gov <i>ORCID:</i> 0000-0001-6764-073X  didamarkovic
INTERESTS	LARGE-SCALE STRUCTURE COSMOLOGY (DARK ENERGY AND DARK MATTER), COORDINATION OF DISPERSED TECHNICAL TEAMS, SURVEY SYSTEMATICS, SCIENTIFIC COMPUTING, SYNERGY OF ART & SCIENCE	
MISSIONS	NASA's Nancy Grace Roman Space Telescope <i>HLIS Cosmology Project Infrastructure Team</i> Pipeline Manager <i>Commissioning Steering Group</i> member <i>HLIS Cosmology Project Infrastructure Team</i> deputy PI	2020-present 2025-present 2024-present 2023-present
	Euclid Consortium - ESA's Euclid Space Telescope , <i>Catalogues for Data Release 1 (DR1-KP-GC-3)</i> Key Project co-lead, <i>Builder</i> , <i>Inter-science-taskforce for Modeling (IST:NL)</i> development consultant, <i>Publications Group - Science</i> selected member, <i>Galaxy Clustering Working Group Likelihood Work Package</i> co-lead, <i>Galaxy Clustering Working Group Link to Simulations Work Package</i> co-lead, <i>Inter-science-taskforce for Forecasting (IST:F)</i> editorial team member, <i>Inter-science-taskforce for Forecasting (IST:F) Galaxy Clustering subgroup</i> co-lead, <i>Galaxy Clustering End-to-end (GC-E2E) Simulations Project</i> co-lead,	2007-present 2024-present awarded in 2020 2020-present 2019-present 2018-2020 2016-2017 2015-2019 2015-2019 2014-2018
	Dark Energy Survey Weak Lensing Shear Data tester	2013-14
EMPLOYMENT	Research Scientist at NASA's Jet Propulsion Laboratory, Caltech, Pasadena, CA, USA. <i>A permanent position working on Euclid and Roman missions, and other dark sector projects.</i>	2019-present
	Research Fellow at the Institute of Cosmology & Gravitation, University of Portsmouth, UK. <i>A senior postdoctoral position allowing independence to pursue my own research interests.</i>	2016-2019
	UK Space Agency Senior Research Associate with Prof. Will Percival at the Institute of Cosmology & Gravitation, University of Portsmouth, UK. <i>Developing the survey strategy and data analysis pipeline for Euclid.</i>	2014-2016
	Visiting Researcher with Prof. Sarah Bridle remotely at the School of Physics and Astronomy, University of Manchester, UK. <i>Testing Dark Energy Survey weak lensing data.</i>	2013-2014
	Transregio33 Postdoctoral Fellow with Prof. Jochen Weller at the University Observatory Munich, Ludwig-Maximilian University, DE. <i>Developing models of large-scale structure in a warm dark matter (WDM) cosmology.</i>	2012-2013
EDUCATION	Ludwig-Maximillian University , Munich, DE Ph.D. in Astrophysics at the International Max Planck Research School on Astrophysics	2009-2013
	Darwin College, University of Cambridge , Cambridge, UK Certificate of Advanced Study in Applied Mathematics (Masters degree and Part III of the Tripos),	2008-2009
	University College London , University of London, UK Master in Science in Astrophysics (MSci Astrophysics),	2004-2008
HONOURS AND AWARDS	<i>NASA ROSES Astrophysics Data Analysis Program</i> proposal selected (PI, \$750k) <i>JPL Team Award</i> for Roman HLIS Cosmology PIT <i>Roman Project Infrastructure Team</i> proposal selected (deputy PI, ~\$19M)	2025-2028 2024 2023-2028

	<i>Annual Euclid STAR Leadership & Coordination award</i>	2023
	<i>JPL Research and Technology Development Strategic grant (PI, ~\$900k)</i>	2022-25
	<i>JPL Voyager Award for outreach</i>	2022
	<i>NASA ROSES Astrophysics Theory Program proposal selected (admin PI, \$750k)</i>	2022-2026
	<i>Euclid Consortium Builder</i> status for key, long-term contributions to the Euclid mission	2020
	<i>Annual Euclid STAR team award</i>	2019
	<i>Annual Euclid STAR postdoc award</i> recognising exceptional contributions to the mission	2017
	<i>Public Engagement Large Awards Scheme for Entropy (PI, £25k, STFC)</i>	2015-2017
	<i>R & D Grant for Entropy (€8k, Arcadi Île de France)</i>	2016
	<i>Brian Duff Memorial Prize in Physics: best fourth year project in the department</i>	2008
	<i>Summer Studentship (£2010, Royal Society)</i>	2007
	<i>Zois Scholarship for Gifted Students (approx. €25k, Slovenia)</i>	2000-2010
TEACHING & MENTORING	<i>Masters Thesis (Intern) co-mentor to Ms. Blanca Crazzolara, ETH Zurich, CH & JPL, Pasadena, USA</i>	2025
	<i>Postdoc co-advisor to Dr. Diogo Souza, JPL, Pasadena, USA</i>	2024-present
	<i>Intern mentor to Ms. Maria Tsedrik, JPL, Pasadena, USA</i>	2024
	<i>Intern mentor to Mr. Shawn Ray, JPL, Pasadena, USA</i>	2023
	<i>Postdoc advisor to Dr. Sujeong Lee, JPL, Pasadena, USA</i>	2022-present
	<i>Cosmology masters course tutor, Ludwig Maximillian University, Munich, DE</i>	2011-2013
	<i>Co-supervisor of a master student, Ludwig Maximillian University, Munich, DE</i>	2011-2012
	<i>Part-time astronomy demonstrator, University of London Observatory, UK</i>	2006-2008
	<i>Peer Assisted Learning leader (volunteer), University College London, UK</i>	2006-2007
	<i>GCSE-level maths tutor (volunteer), St. Pancras Library, London, UK</i>	2006
SELECTED TRAINING	<i>Be Equitable: Inclusive Leadership (1 session) @ Jet Propulsion Laboratory</i>	2024
	<i>Caltech Center for Teaching, Learning, & Outreach (5 sessions): How Learning Works,</i>	2024
	<i>Alan Alda Center (3 sessions): Share the Science @ Stony Brook University</i>	2022
	<i>Coursera (Prof Andrew Ng): Machine Learning (8 weeks) @ Stanford University</i>	2021
	<i>Professional workforce development: Managing Virtual Teams (2 days) @ NASA</i>	2020
PEER REVIEW & EDITORIAL	Reviewer for JPL Internal Grants, NASA ROSES, Universe Journal, <i>Veni Grant</i> , PRD, PRL, & MNRAS. Guest editor for special issue of the Universe Journal on Λ (2022).	
OTHER COMMITTEES & PANELS	<i>NASA PhysPAG Executive Committee</i> member	2026-present
	<i>Euclid Consortium Publication Group - DR1 Science</i> selected member	2023-present
	<i>Euclid NASA Science Center at IPAC (ENSCI) Operations Readiness Review</i> panel member	2023
	<i>JPL Science Visitor and Colloquium Program</i> committee member	2022-present
	<i>User Panel for the Euclid NASA Science Center at IPAC (ENSCI)</i> member	2022-2024
	<i>NASA ROSES Astrophysics</i> review panel	2022
	<i>Nancy Grace Roman Space Telescope Calibration Engineering Peer Review</i> panelist/reviewer	2021
	<i>Euclid Consortium Publication Group - Pre-launch Science</i> selected member	2019-2021
	<i>Euclid STAR prize</i> committee member	2018
	<i>Postdoc representative at the Equality and Diversity committee, ICG, UK</i>	2016-2017
	<i>Postdoc representative at the management committee, ICG, UK</i>	2016-2018
	<i>Equality and diversity committee (and Athena SWAN team), ICG, UK</i> member	2015-2016
ORGANISATION OF SCIENTIFIC EVENTS	Scientific Organising Committee: <i>Euclid Consortium Annual Meeting, Rome, Italy</i>	2024
	Scientific Organising Committee: <i>Euclid Consortium Annual Meeting, Oslo, Norway</i>	2022
	Organiser: <i>Euclid US monthly telecon - virtual</i> ,	2020-2022
	Cosmology Session Organiser: <i>CSST-Euclid-Roman Workshop - virtual</i> ,	2021
	Organiser: <i>Roman Pilot Surveys Workshop - virtual</i> ,	2020
	Science Organising Committee: <i>Euclid Advanced School - virtual</i> ,	2020
	Galaxy Clustering Session Organiser: <i>GOLD The Golden Cosmological Surveys Decade</i> , cancelled due to COVID-19 pandemic, Paris Orsay, France	2020

Scientific Organising Committee:	<i>42nd COSPAR Assembly: Large Space-based Optical and Infrared Surveys session, Pasadena, CA, USA</i>	2018
Scientific Organising Committee:	<i>Paving the way for next generation of cosmological surveys: new results and new methods in galaxy clustering, Sexten, Italy</i>	2018
Local Organising Committee:	<i>Euclid UK Meeting, Portsmouth, United Kingdom</i>	2017
 SELECTED TALKS		
LSS Journal Club:	<i>Weak Lensing Cosmology with Roman IR Imaging, Royal Observatory, Edinburgh</i>	July 2025
Colloquium Series:	<i>Weak Lensing Cosmology with Roman IR Imaging, Trieste Astronomical Observatory, INAF/OATS</i>	June 2025
Astronomy Seminar:	<i>Cosmology with Euclid and Roman, Research Center Ajdovščina, University of Nova Gorica</i>	July 2024
Astrodebata Seminar:	<i>Cosmology with Euclid and Roman, Fakulteta za Matematiko in Fiziko, University of Ljubljana</i>	June 2024
Invited Seminar:	<i>Cosmology with Roman's High Latitude Imaging Survey, IPAC at Caltech Seminar</i>	May 2024
Invited Colloquium:	<i>From Pixels to Cosmology with Euclid, Jet Propulsion Laboratory Chief Scientist Office Colloquium</i>	June 2023
Invited Plenary Talk:	<i>Finding a Euclid fact in a haystack, Euclid Consortium Meeting, Copenhagen, DK</i>	June 2022
Invited Virtual Plenary Talk:	<i>Optimising EC internal communication, Euclid Consortium Meeting, online</i>	May 2021
Virtual Presentation:	<i>Science Planning Highlights: Cosmology, Rhodes Euclid Team Review at NASA, online</i>	Oct 2020
Invited Virtual Lecture:	<i>Observing Dark Energy, ITB Summer School on Galaxies and Cosmology, Indonesia</i>	Sep 2020
Talk:	<i>Cosmology with the anisotropic galaxy power spectrum with Euclid, Seminar at the University of Louvain, BE</i>	Feb 2020
Requested talks:	<i>Galaxy Clustering End-to-end Group & GC Likelihood Work Package, Euclid Consortium Meeting, Bonn, DE</i>	June 2018
Invited Talk:	<i>Preparing for galaxy clustering analysis with Euclid, Consistency of Cosmological Datasets Workshop, Cambridge, UK</i>	May 2018
Talk:	<i>Euclid: the spectro-systematics challenge, Simulated Skies Workshop, Madrid, ES</i>	Apr 2018
Invited talk:	<i>Galaxy clustering analysis with Euclid, Cosmology with Large Galaxy Surveys School, NAOC, Beijing, China</i>	Aug 2017
Requested talk:	<i>Pypelid - Euclidiser of catalogues, Euclid ground segment top-level data group (OU-LE3) meeting, RAS, London, UK</i>	Feb 2017
Requested talk:	<i>Euclid IST: a road to reliable forecasts, Euclid UK Meeting, RAS, London, UK</i>	Dec 2016
Requested talk:	<i>Simulated Ubercal with Euclid-like 4-dither patterns, Euclid Photometric Calibration Workshop, ESAC, Madrid, Spain</i>	Sep 2016
Talk:	<i>Euclid galaxy clustering end-to-end, National Astronomy Meeting, Nottingham, UK</i>	June 2016
Talk:	<i>Warm dark matter from the large scale structure, Astroparticle Physics 2014, Amsterdam, NL</i>	June 2014
Talk:	<i>Warm dark matter, University of Munich Observatory Colloquium, Munich, DE</i>	May 2013
 SELECTED SCIENCE COMMUNICATION		
Invited Talk (Slovenian language):	<i>Večeri na astronomskem observatoriju, Temna energija oziroma pospešeno širjenje vesolja, Astronomski observatorij, Golovec, Slovenija</i>	Jun 2025
Invited Interview:	<i>Why AxS podcast: Episode 3: Dark Matter: Tiny humans. Vast universe. ArtCenter College of Design, Pasadena, USA</i>	Nov 2024

Invited Talk / Interview: (<i>Virtual, ~60k views</i>) <i>NASA Twitter Spaces: #AskNASA about Dark Matter & Dark Energy</i> , Hosted by NASA Headquarters, USA	Jul 2023
Invited Keynote: <i>The Death Valley Dark Sky Festival: The Cosmic Autobiography</i> , Furnace Creek, Death Valley, CA USA	Feb 2022
Invited Talk: (<i>Virtual, ~22k views</i>) <i>Von Karman Lecture Series: The Warm Glow of Our Cool Universe</i> , Jet Propulsion Laboratory, Pasadena, USA	Oct 2021
Invited Video Speaker: <i>Sky Stories: Cosmologists Occupy an Art Space</i> , ArtCenter College of Design, Pasadena, USA	Dec 2020
Adviser: <i>Echoes of the Universe's Creation</i> , Press release video for NASA Goddard Roman Space Telescope, UK	Nov 2020
Talk: <i>Euclid and the Dark Universe</i> , Lecture at the Farnham Astronomical Society, UK	April 2018
Social Media: <i>Led the first Euclid UK Twitter campaign</i> , Euclid Consortium Meeting, Bonn, DE	June 2018
Talk: <i>Euclid: A Space Mission to Map the Dark Universe</i> , Space Lectures at the <i>Winchester Science Centre</i> , UK	May 2017
Five performances: <i>Entropy</i> - an immersive story about the life of our universe, TodaysArt Festival (NL), Euclid Meeting (UK), Sonar Festival (E)	2016-2018
Co-lead: <i>Entropy</i> project for communicating science to the public through art, International art-science project: UK, BE, NL, FR, DE + CAN	2011-2018
Talk: <i>Euclid: A Space Mission to Map the Dark Universe</i> , <i>Stargazing Live</i> , University of Portsmouth, UK	Jan 2017
Talk: <i>Entropy: Astronomy Staged as a Live Immersive Performance</i> , National Astronomy Meeting, Nottingham, UK	June 2016
Invited Talk: <i>Entropy: Astronomy Staged as a Live Immersive Performance</i> , Resonate Festival, Belgrade, SR	Apr 2016
Talk (Slovenian language): <i>Sprehodi skozi vesolje</i> : Življenje našega vesolja, Slovenian Museum of Natural History, Ljubljana, SI	May 2014

PUBLICATIONS

WITH A SIGNIFICANT CONTRIBUTION

117 [refereed publications](#) (4 first-author, 20 active contributor), 35 h-index (ADS).

Tsedrik et al. *Interacting dark energy constraints from the full-shape analyses of BOSS DR12 and DES Year 3 measurements* 2025MNRAS.541L..65T [arXiv:2502.03390](#).

Robertson, Huff, **Markovic** & Baojiu. *Modelling the redshift-space cluster-galaxy correlation function on Mpc scales with emulation of the pairwise velocity distribution* 2024MNRAS.533.4081R [arXiv:2406.01527](#).

Robertson, Huff & **Markovic**. *Why weak lensing cluster shapes are insensitive to self-interacting dark matter* 2023MNRAS.521.3172R [arXiv:2210.13474](#).

Taylor & **Markovič**. *Covariance of photometric and spectroscopic two-point statistics: Implications for cosmological parameter inference* Physical Review D, Volume 106, Issue 6, article id.063536 [arXiv:2205.14167](#).

Carrilho et al. *Interacting dark energy from redshift-space galaxy clustering* 2021JCAP...10..004C [arXiv:2106.13163](#).

Taylor, **Markovič**, Pourtsidou, and Huff. *Redshift space distortions: Unmixing radial scales in projection* Physical Review D, Volume 105, Issue 8, article id.084007 [arXiv:2106.05293](#).

Yahia-Cherif et al.. *Validating the Fisher approach for stage IV spectroscopic surveys* 2021A&A...649A..52Y [arXiv:2007.01812](#).

Shirasaki, Huff, **Markovič**, and Rhodes. *A Semianalytic Model of the Pairwise Velocity Distribution between Dark Matter Halos* 2021ApJ...907...38S [arXiv:2008.02960](#).

Tutusaus et al.. *Euclid: The importance of galaxy clustering and weak lensing cross-correlations within the photometric Euclid survey* 2020A&A...643A..70T [arXiv:2005.00055](https://arxiv.org/abs/2005.00055).

Euclid Collaboration. *Euclid preparation VII: Forecast validation for Euclid cosmological probes* 2020A&A...642A.191E [arXiv:1910.09273](https://arxiv.org/abs/1910.09273).

d'Amico et al. *The cosmological analysis of the SDSS/BOSS data from the Effective Field Theory of Large-Scale Structure* 2020JCAP...05..005D [arXiv:1909.05271](https://arxiv.org/abs/1909.05271).

Bose, Pourtsidou, **Marković**, and Beutler. *Assessing non-linear models for galaxy clustering - II. Model validation and forecasts for Stage IV surveys* 2020MNRAS.493.5301B [arXiv:1905.05122](https://arxiv.org/abs/1905.05122).

Thomas, Kopp, and **Marković**. *Using large-scale structure data and a halo model to constrain generalized dark matter* 2019MNRAS.490..813T [arXiv:1905.02739](https://arxiv.org/abs/1905.02739).

Marković, Bose, and Pourtsidou. *Assessing non-linear models for galaxy clustering I: unbiased growth forecasts from multipole expansion* 2019OJAp....2E..13M [arXiv:1904.11448](https://arxiv.org/abs/1904.11448).

Marković, et al. *Large-scale retrospective relative spectrophotometric self-calibration in space*. MNRAS, 467.3677M, May 2017, [arXiv:1606.07061](https://arxiv.org/abs/1606.07061).

Marković & Viel. *Ly α Forest and Cosmic Weak Lensing in a Warm Dark Matter Universe*. Review in PASA, 2014, vol. 31, e006, [arXiv:1311.5223](https://arxiv.org/abs/1311.5223).

Viel, **Marković**, Baldi & Weller. *The Non-Linear Matter Power Spectrum in Warm Dark Matter Cosmologies*. MNRAS, 421...50V, March 2012, [arXiv:1107.4094](https://arxiv.org/abs/1107.4094).

Smith & **Marković**. *Testing the Warm Dark Matter Paradigm with Large-Scale Structures*. Phys. Rev. D, 84(6):063507, September 2011, [arXiv:1103.2134](https://arxiv.org/abs/1103.2134).

Marković, Bridle, Slosar & Weller. *Constraining Warm Dark Matter with Cosmic Shear Power Spectra*. JCAP, 2011, [arXiv:1009.0218](https://arxiv.org/abs/1009.0218).

See list of all my publications on ADS for more.
