











Dr. Gauri Sharma





(Ph.D. in Astrophysics and Cosmology)





CONTACT & PERSONAL DETAILS





 UWC: University of the Western Cape
 gsharma@uwc.ac.za; gsharma@sissa.it
 gourisharma_7
 [GSharma LinkedIn](#)
 0000-0002-6070-2851
 [NASA/ADS publication list](#)
 [GSharma ResearchGate](#)
 +39 3274976099
 Trieste, Italy

 20 July 1992
 Jaswant Nagar (U.P.), India
 English (work proficiency), Hindi (native speaker), Italian (elementary), French (elementary)










EDUCATION

 Ph.D. in Astrophysics and Cosmology  4/10/2021 (Academic year: 2017-2021)  [Certificate](#) and [Thesis](#)
 Scuola Internazionale Superiore di Studi Avanzati (SISSA), Italy





 Masters in Astrophysics  26/06/2017 (Academic year: 2015-2017)  [Certificate](#), [Transcripts](#) and [Thesis](#)
 Laboratoire d'Astrophysique de Marseille, Aix-Marseille University, France






 Bachelor of Science (Mathematics)  24/06/2012 (Academic year: 2009-2012)  [Certificate & Transcripts](#)
 V.R.S. Govt. Girls College, Jiwaji University, Gwalior, India






SCHOLARSHIPS, ACHIEVEMENTS & AWARDS






★ Chair of Dark Matter Focus Meeting at IAU General Assembly 2024, Cape Town  [FM9](#)
★ Postdoctoral Fellowship (3 years) from the South African Radio Astronomy Observatory  [Certificate](#)
★ **Achievement:** Marie Curie Fellowship 2021: Seal of excellence for 'TraDE DM' project  [Certificate](#)
★ **Achievement:** Newton Fellowships 2021: Proposal Selected and Held in Reserve  [Certificate](#)
 **Award:** Ph.D. in Astrophysics and Cosmology 'cum laude'  [Certificate](#)
 **Scholarship:** International Doctoral Fellowship from the Italian Ministry of Higher Education (4 years)
 **Scholarship:** Master SPACE Aix Marseille University, fellowship of the AMIDEX foundation (2 years)
 **Award:** Gold medal for scoring highest in Under-graduation.






RESEARCH EXPERIENCE

 UNIVERSITY OF VIENNA, AUSTRIA  03/2020 - 06/2020
 **Ph.D. Exchange ERASMUS Fellow:** Pressure gradient corrections in high- z galaxies.
 Prof. Glenn van de Ven (Stellar Dynamics Group)






 OBSERVATOIRE DE GENEVE, SWITZERLAND  02/2017 - 06/2017
 **Master thesis:** Inside Cosmic Re-ionization: A prediction for the James Webb Space Telescope.  [Thesis](#)
 Dr. Stéphane De Barros and Prof. Pascal Oesch (Galaxy Formation Group)

 INAF, CATANIA, ITALY  06/2016 - 08/2016
 **Summer Intern:** Bouncing cosmological model by RG improved cosmology.  [Recommendation](#)
 Prof. Alfio Bonanno

 ACADEMIA SINICA INSTITUTE OF ASTRONOMY AND ASTROPHYSICS (ASIAA), TAIWAN  07/2015 - 08/2015
 **Summer Intern:** Exploring Seasonal process and wind direction on Mars south pole.  [Certificate](#)
 Dr. Meg Schwamb and Prof. Shiang-Yu Wang



 ARYABHATTA RESEARCH INSTITUTE OF OBSERVATIONAL SCIENCES, INDIA  02/2015
 **Winter School:** Quasars primarily light curve generation and flux calibration  [Certificate](#)
 Dr. Praveen Serawat, Prof. Hum Chand

WORK EXPERIENCE







	Telescope trainee (1 year 10 months)  Certificate and Recommendation
	INDIAN INSTITUTE OF ASTROPHYSICS (IIA), INDIA  23/09/2013 - 30/06/2015
	Prof. GCA Anupama and Prof. BC Bhatt

I worked at IIA for 1 year and 10 months as a research assistant (Telescope trainee). I was assisting scientists in acquisition of astronomical observations with 2m Himalayan Chandra Telescope (HCT), installed at Hanle-Leh, India at an altitude of 4500m above msl, which is remotely operated from CREST campus IIA, Bangalore.









COLLABORATIONS

	MAGPI Collaboration: Middle Ages Galaxy Properties with Integral Field Spectroscopy survey
	MIGHTEE Collaboration: The MeerKAT International GHz Tiered Extragalactic Exploration





SUPERVISION EXPERIENCE

	Ms. Savanha de Koc, Supervision of NASSP BSc Honours student in 2022 at UCT Node  Certificate
	Mr. Nhlakanipho Sabelo Kunene, Supervision of NASSP BSc Honours student in 2022, UWC
	Ms. Mpendulo Sibiya, Masters in Astrophysics 2022, UWC (co-supervised) Thesis: The Interstellar Medium Scaling Relations in Cosmological Simulations (graduated in 2023)
	Mr. Nhlakanipho Sabelo Kunene, Masters in Astrophysics 2023-25, UWC Thesis: Pipeline for Realistic Datacube Creation from Simulated Data
	Ms. Refilwe Mmekwe, Masters in Astrophysics 2021-24, UWC Thesis: Learning Radial Acceleration Relation in Galaxies





ASTRONOMICAL TOOLS

	SKIRT : Simulating radiation transfer in astrophysical systems.
	3D-BAROLO : 3D-Kinematics modelling tool for datacubes (non-parametric)
	GALPAK3D : 3D-Kinematics modelling tool for datacubes (parametric)
	ESO-REFLEX : 3D-spectroscopic data reduction tool
	CARACal & CASA : Radio interferometer data reduction and analysis tool
	CIGALE : Spectral Energy Distribution (SED) fitting tool
	APT , IRAF , CLOUDY
	Datasets: KROSS, KMOS-3D, KGES, MAGPI, URCs, HiRISE database

COMPUTATION SKILLS

	Computation Languages: Python, Fortran, C, C++, MySQL
	Operating system: Linux, Mac, Windows
	Plotting: Matplotlib, Topcat, INKSCAPE (Vector graphic tool), etc.
	Machine Learning: Tensorflow, Keras, Data Science algorithms (Example Code Jupyter Notebook)

SCIENCE DISSEMINATION (MEDIA)

	Press Release on evolving dark matter halos with cosmic time: SISS MediaLab and PhyOrg
	Articles on Dark Matter for Layman: The Conversation , AAAS , Vice News , The Print , UWC News
	Video on Dark Matter for Layman: Cosmoknowledge
	Radio Conversations on dark matter: Radio 786 (100.4 FM), Smile904.FM, Cape Talk Radio, etc.

EXTRACURRICULAR ACTIVITIES AND INTERESTS

STUDENT REPRESENTATIVE	For Astrophysics and Cosmology group SISSA (2018-2020)
LOGISTIC MANAGEMENT	For Astrophysics and Cosmology group SISSA (2019-2020)
WEB MANAGEMENT	150hrs Job for building the website of IFPU (Institute for Fundamental Physics of the Universe)
VECTOR GRAPHIC DESIGNER	Designed the logo for Institute for Fundamental Physics of the Universe, Italy
EVENT MANAGEMENT	Local Organizer Committee (LOC) 'Cosmology 2018 in Dubrovnik: Conference', 'Cosmology 2023 in Trieste: Conference' Organizing welcome and farewell parties
PUBLIC OUTREACH	SISSA for schools , Trieste Next 2020
EXTRA	Reading History books, Sketching, Painting, COOKING (R&D)*

DECLARATION


I hereby declare that the above information provided by me is correct and authentic to the best of my knowledge and belief. Last but not least, I believe in equality, diversity, inclusion and access. Thank you :)


REFERENCES

1) PROF. PAOLO SALUCCI [PHD ADVISOR]

 SCUOLA INTERNAZIONALE SUPERIORE DI STUDI AVANZATI (SISSA)


 TRIESTE, ITALY


 (+39)3318942090


 salucci@sissa.it

2) PROF. GLENN VAN DE VEN [COLLABORATOR]

 UNIVERSITY OF VIENNA

 VIENNA, AUSTRIA

 (+43)1427753806

 glenn.vandeven@univie.ac.at

OTHER COLLABORATORS




A/Prof. Jonathan Freundlich (UNISTRA, France)


Prof. Benoit Famaey (UNISTRA, France)

Prof. Shantanu Desai (IITH, India)




Prof. Maarten Baes (UGhent, Belgium)


PUBLICATION LIST



1: Flat rotation curves of $z \sim 1$ star-forming galaxies   




 Gauri Sharma, Paolo Salucci, C. M. Harrison, Glenn van de Ven, Andrea Lapi

 Feb 2021  Monthly Notices of the Royal Astronomical Society, Volume 503, Issue 2, May 2021, Pages 1753–1772



2: Dark matter fraction in $z \sim 1$ star-forming galaxies   


 Gauri Sharma, Paolo Salucci, Glenn van de Ven


 May 2021  Astronomy & Astrophysics, 653, A20 (2021)

3: Observational evidence of evolving dark matter profiles at $z \leq 1$   

 Gauri Sharma, Paolo Salucci, Glenn van de Ven

 March 2022  Astronomy & Astrophysics, 659, A40 (2022)

5: **Book-** Dark matter halos of past 6.5 billion year galaxies  

 Gauri Sharma, ISBN: 978-620-4-21240-1, LAP LAMBERT Academic Publishing

For Other Publication in Collaborations/Proceedings/Un-refereed check [here](#)