

Sabyasachi Goswami

PERSONAL INFORMATION

Date of Birth: August 11, 1993

Citizenship: Indian

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EDUCATION

CENTRA

Postdoctoral Researcher

Working on the data coming from the integral field spectroscopy of hundreds of nearby galaxies that have hosted supernovae from The All-weather MUse Supernova Integral field Nearby Galaxies (AMUSING) survey, and investigating in detail the dust properties near and far of the explosion site for a variety of galaxies and supernova types

Lisbon, Portugal

Dec 2021 – Present

CENTRA

Visitant

Lisbon, Portugal

Oct 2021 – Nov 2021

SISSA

Visiting Researcher

Trieste, Italy

Jan 2021 – July 2021

SISSA

PhD Astrophysics & Cosmology

Supervisors: Prof. Alessandro Bressan, Dr. Laura Silva, Prof. Andrea Lapi

External Examiners: Prof. Francesca Matteucci and Prof. Donatella Romano

Thesis title: *'On the effects of the Initial Mass Function on Galactic chemical enrichment: the role of Pair Instability Supernovae'*

Trieste, Italy

Nov 2016 – Dec 2020

Credits awarded for the courses on Introduction to Cosmology, Cosmic Microwave Background, Large Scale Structure formation, Stellar Structure and Evolution, Dark Matter and Dark Energy, Radiative process in astrophysics, Statistical Methods for Astrophysics and Cosmology.

The University of Edinburgh

M.Sc Theoretical Physics

Dissertation: Models of Galaxy formation

Supervisor: Prof. Sadegh Khochfar

Edinburgh, UK

Oct 2015 – Oct 2016

University of Delhi

B.Sc with Honours in Physics

Delhi, India

July 2011 – July 2014

ADDITIONAL STUDIES

- Applied Machine Learning in Python- offered by University of Michigan through Coursera
- MOOC online course offered by University of Rochester- Highlights of Modern Astronomy
- MOOC online course offered by SISSA, Trieste, Italy - Dark Matter in Galaxies
- Introduction to Psychology- offered by Yale University through Coursera

PUBLICATIONS

- **'Merging Rates of Compact Binaries in Galaxies: Perspectives for Gravitational Wave Detections'**
L. Boco, A. Lapi, **S. Goswami**, F. Perrotta, C. Baccigalupi, and L. Danese, ApJ 881, 157 (2019), 1907.06841
- **'New Analytic Solutions for Galaxy Evolution: Gas, Stars, Metals and Dust in local Early-Type Galaxies and in their high-z Starforming Progenitors'**
Pantoni, L., Lapi, A., Massardi, M., **Goswami, S.**, & Danese, L. 2019, ApJ, 880, 129
- **'The effects of the Initial Mass Function on galactic chemical enrichment'**
S. Goswami, A. Slemer, P. Marigo, A. Bressan, L. Silva, M. Spera, L. Boco, V. Grisoni, L. Pantoni, A. Lapi , A&A 650, A203 (2021) DOI: 10.1051/0004-6361/202039842
- **'Impact of very massive stars on the chemical evolution of extremely metal-poor galaxies'**
S. Goswami, V. Grisoni, L. Silva, A. Bressan, G. Costa, P. Marigo, G.L. Granato , A. Lapi , M. Spera A&A 663, A1 (2022) DOI: 10.1051/0004-6361/202142031
- **The contribution of massive stars on Magnesium abundances at low metallicities'**
S. Goswami, V. Grisoni, L. Silva, A. Bressan, P. Marigo, A. Lapi and M. Spera (in preparation)

ADVANCED TECHNICAL SKILLS

- Programming Language –Python ,C++, Fortran[Basic], SQL[Basic]
- IFS related – Prospector, SpecUtils, FSPS, MPDAF, pPXF, PyRAF,EMCEE
- OS & Others: Windows, Linux, Latex, Visual Studio

CONFERENCES/SCHOOLS

- IberiCOS 2022, Barcelona, Spain
- CRISP 2021 , Peniche, Portugal
- Supervirtual 2021
- Astro-TS 2019 IFPU, Trieste, Italy
- Astro-TS 2017, SISSA, Trieste, Italy
- "Galaxy Formation at its Peak ", Higgs Center of Theoretical Physics, The University of Edinburgh
- Deep Sky observation workshop, New Delhi , 2014
- Astronomy Workshop, University of Delhi, 2013

SEMINARS/TALKS

- IAA-CSIC, Granada. Spain
- CENTRA, IST, Lisbon, Portugal

- Instituto de Astrofísica e Ciências do Espaço, Porto, Portugal
- SWIFAR, Yunnan University, China
- LUPM, Montpellier University, France
- Macquarie University, Sydney, Australia
- Armagh Observatory and Planetarium, Armagh, UK
- Technische Universität Darmstadt, Germany
- Bowling Green State University, Ohio, USA
- Tartu Observatory, University of Tartu, Estonia
- Astrophysics Research Institute, Liverpool John Moores University, UK
- E.A. Milne Center for Astrophysics, University of Hull, UK

LANGUAGE

- **English** [fluent]
- **Hindi** [fluent]
- **Bengali** [Mother tongue]
- **Italian**[Basic]

AWARDS AND COMPETITIONS

- One of 60 students across the University to receive the Edinburgh Award (Work Experience)
- Got scholarship for high-school from the government for scoring more than 90 % in AISSE
- 1st prize in Presentation competition organized in University of Delhi. Topic of presentation(Dark matter in Galaxies)
- 2nd prize in Physics Quiz in the annual Physics fest in college during undergraduate studies.

TEACHING EXPERIENCE

Worked as a part-time tutor during Bachelor's and Master's teaching students in the age group 11-20 teaching Physics, Chemistry, Maths, Statistics to school and university students.

ORGANIZATIONAL ABILITY

- Organizer of Astrophysics and Cosmology Journal Club in SISSA, Trieste.
- Improved organizational, communicational skills working part time as a Customer Care Steward during my master's which involves different kinds of roles and duties.
- Helped organising Physics fest during Bachelor's

REFERENCES

Prof. Alessandro Bressan

☑ Full Professor

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SISSA,

Trieste, Italy

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Prof. Andrea Lapi

✉ Associate Professor
Department of Astrophysics & Cosmology,
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Trieste, Italy
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Dr Laura Silva
✉ Researcher
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