



MARGHERITA TALIA

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Department of Physics and Astronomy "Augusto Righi", Via Gobetti, 93/2, 40129 Bologna (Italy)

KEYWORDS

galaxies surveys
spectroscopy evolution
feedback outflows
star formation dust
multi-wavelength

LANGUAGES

Italian: Native

English: Proficient

German: Basic

PUBLICATIONS

(last update: Jan. 2024)

Refereed papers: 100 |

N° citations (ADS): 4542

h-index (ADS): 39

1st author papers: 7 |

COMMISSION OF TRUST

Referee: A&A, MNRAS

Panel reviewer: NRAO

PhD evaluation committees

Post-doc hiring committees

SOCs & LOCs

PRESS RELEASES

COSMOS-Web |

ALPINE |

EVENTS

ALMABO conferences |

EAS 2023 - SS22 |

Euclid SWG-GAE 2024 |

MAIN RESEARCH INTERESTS

- High-redshift galaxy surveys
- Physical properties of extremely dust obscured sources and their contribution to the cosmic star-formation rate density
- Preparation of future surveys, missions, and instruments
- Galaxy formation and evolution, focusing on feedback mechanisms (e.g. outflows) and AGN-galaxy co-evolution
- Multi-wavelength (UV to sub-mm) study of the multi-phase inter-stellar medium in low- and high-redshift galaxies
- Comparison between observations and models of galaxy evolution

EXPERIENCE

Senior assistant professor | Department of Physics and Astronomy

2022 - present

University of Bologna (Italy)

Junior assistant professor | Department of Physics and Astronomy

2019 - 2022

University of Bologna (Italy)

Post-doc | Department of Physics and Astronomy

2013 - 2019

University of Bologna (Italy)

ASN 2020 - 2029 National scientific qualification for Associate Professor (02/C1)

EDUCATION

Ph.D. | Department of Physics and Astronomy

2010 - 2013

University of Bologna (Italy)

- Astronomy
- Thesis title: *The Universe 10 billion years ago: morphologies, star-formation rates and galactic winds in $z \sim 2$ galaxies*
- Supervisors: Prof. A. Cimatti, Dr. M. Mignoli

Master degree | Department of Astronomy

2009

University of Bologna (Italy)

- Astrophysics and Cosmology
- Thesis title: *Galactic-scale outflows at $z \sim 2$*
- Supervisors: Prof. A. Cimatti, Dr. M. Mignoli
- 110/110 cum laude

Master degree | Conservatorio di Musica U. Giordano

2004

Foggia (Italy)

- Piano
- Supervisor: M° M. A. D'Arcangelo

DIGITAL SKILLS

PHYTON | SMONGO
IRAF | CASA | TOPCAT
DS9 | LEPHARE
BBAROLO | MORPHEUS
MPDAF | SLINEFIT
SEXTRACTOR
MAPHYS | QFITSVIEW
PANDORA.EZ | CIGALE

DATA ANALYSIS

long-slit spectroscopy
slitless spectroscopy
IFU | stacking
imaging | interferometry
uv-plane analysis
redshift measurement
SED fitting
catalogues matching
archive data querying

TEACHING

Physics 2 | [Chemistry and Materials Chemistry](#)

📅 2023 - present | 🌐

Astronomical data analysis techniques (Module 2) | [Astronomy](#)

📅 2021 - 2023

Physics 2 (Module 2) | [Chemistry and Materials Chemistry](#)

📅 2021 - 2022

Geometric Optics (tutor) | [Astronomy](#)

📅 2010 - 2011

PI PROJECTS

ELSA | 🌐 | *Euclid Legacy Science Advanced analysis tools*

📅 2024 - 2026

RS-NIRdark | 🌐 | *Radio-Selected Near Infra-red Dark Galaxies*

📅 2019 - present

MAIN COLLABORATIONS

ALPINE | 🌐 | *The ALMA [CII] Survey*

COSMOS-Web | 🌐 | *JWST treasury program in the COSMOS field*

EUCLID | 🌐 | *A space mission to map the Dark Universe*

- *Coordinator of the IST:BlueGrism (with C. Scarlata; 2021 - present)*
- *Coordinator of the Work Package 2 "Physical parameter estimation from spectra" inside the Science Working Group on "Galaxy and AGN evolution" (2019 - present)*
- *Coordinator of the Euclid Pre-Launch Science Key Project KP-GEV-1 "Simulated Euclid data for galaxy & AGN evolution" (with M. Huertas-Company)*

GMASS *Galaxy Mass Assembly ultra-deep Spectroscopic Survey*

MIGHTEE | 🌐 | *MeerKAT International GHz Tiered Extragalactic Exploration*

MOONRISE | 🌐 | *The Main MOONS GTO Extragalactic Survey*

VANDELS | 🌐 | *A deep VIMOS survey of the CANDELS Fields*

- *Coordinator of the spectroscopic measurements working group*

VUDS | 🌐 | *VIMOS Ultra Deep Survey*

AWARDED TELESCOPE TIME (PI)

ALMA | [2021.1.01467.S](#) | 27h

illuminating the dark side of star formation at $z>3$

NOEMA | [S21DJ](#) | 15.5h

illuminating the dark side of cosmic star formation at $z>5$

JVLA | [VLA/18B-118](#) | 10h

Key laboratory to test inter-stellar medium properties of a compact SFG at $z\sim 2$

GRANTS (PI)

HORIZON-EU | [2024 - 2026](#) | 1.5M

- *Call: HORIZON-CL4-2023-SPACE-01*
- *Project number: 101135203*
- *Project name: ELSA - Euclid Legacy Science Advanced analysis tools*

MENTORING

F. Gentile | [PhD](#) | *Co-supervisor: Prof. A. Cimatti*

📅 2021 - present

📍 University of Bologna (Italy)

The obscured star-formation rate density at $z>3$

M. Saponi | [Master](#) | *Co-supervisors: Prof. F. Pozzi, F. Gentile*

📅 on-going

📍 University of Bologna (Italy)

Search for dust-obscured galaxies at radio frequencies in the J1030 field

P. Giorgini | [Master](#) | Co-supervisor: Dr. L. Pozzetti

📅 on-going

📍 University of Bologna (Italy)

A study on star-formation rate tracers with the zCOSMOS-Bright survey

F. Fonzo | [Master](#) |

📅 2023

📍 University of Bologna (Italy)

Search for high-redshift sources with JWST in the SMACS-0723 field

L. Ossino | [Bachelor](#) |

📅 2023

📍 University of Bologna (Italy)

Estimate of dust-corrected SFR from the H α line in galaxies from the SDSS

C. Bellatreccia | [Bachelor](#) | Co-supervisor: Prof. C. Vignali

📅 2022

📍 University of Bologna (Italy)

Spectroscopic classification and X-ray properties in star-forming galaxies and AGN from the SDSS

PUBLIC OUTREACH

Speaker/Performer

Aspettando Euclid: #1 La Geografia dell'Universo | 🌐

📅 04 2023

📍 Bologna, Italy

Piano player in the "The trip of Joe the Photon" musical show on the story of a photon travelling from the Big Bang to the Earth

📅 2011 - 2015

📍 Bologna-Florence-Genoa-Rome, Italy

INVITED TALKS AND SEMINARS

Lunch talk at ESO

📅 06 2023

📍 Garching, Germany

Virtual seminar at OPINAS at MPE & USM

📅 07 2021

📍 Munich, Germany

Virtual talk for the AAS Journal Author Series

📅 05 2021

📍 Youtube | 🌐

Talk at the meeting: ASPECS and ALMA large programs

📅 11 2019

📍 Ringberg Castle, Germany

Talk at the conference: EWASS 2019

📅 06 2019

📍 Lyon, France

Talk at the NORDITA program: Zoom-In and Out: from the Interstellar Medium to the Large Scale Structure of the Universe

📅 06 2019

📍 Stockholm, Sweden

Talk at the meeting: Science with multi-object spectrographs: perspectives and opportunities for the Italian community

📅 12 2018

📍 Milano, Italy

Cluster Colloquium at the Excellence Cluster Universe

📅 07 2018

📍 Garching, Germany

Coffee talk at MPIA

📅 05 2018

📍 Heidelberg, Germany

Seminar at SISSA

📅 04 2018

📍 Trieste, Italy

Talk at the meeting: Advances in Galaxy Evolution through a new Generation of Spectroscopic Surveys

📅 06 2017

📍 Ringberg Castle, Germany

Seminar at the Instituto de Física y Astronomía y Centro de Astrofísica de Valparaíso

📅 12 2016

📍 Valparaíso, Chile

ESO Colloquium at ESO Vitacura

📅 11 2016

📍 Santiago de Chile

Seminar at INAF

📅 07 2015

📍 Padova, Italy