



# MARGHERITA TALIA

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## KEYWORDS

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

## LANGUAGES

Italian: Native  
English: Proficient  
German: Basic

## PUBLICATIONS

(last update: March 2025)  
Refereed papers: 126 |   
N° citations (ADS): 6406  
h-index (ADS): 46  
1st author papers: 7 |

## PRESS RELEASES

ELSA |   
COSMOS-Web |   
ALPINE |

## COMMISSIONS OF TRUST

Referee: A&A, MNRAS  
Science review panels:  
NRAO  
Member of: SOCs & LOCs,  
PhD evaluation committees,  
Post-doc hiring committees

## EVENTS

ALMABO conferences |   
ELSA KoM |   
Euclid SWG-GAE 2024 |   
EAS 2023 - SS22 |

## MAIN RESEARCH INTERESTS

- Extra-galactic surveys
- Preparation of future surveys, missions, and instruments
- Galaxy formation and evolution, focusing on feedback mechanisms (e.g. outflows) and AGN-galaxy co-evolution
- Search and characterization of extremely dust obscured galaxies
- Multi-wavelength study of the multi-phase inter-stellar medium in 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 - 2032 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

## VISITOR-MODE OBSERVATIONS

VLT-VIMOS: 7 nights

## TELESCOPE TIME (CO-I)

Large Programs

COSMOS-Web (JWST)

CHAMPS (ALMA)

ALPINE (ALMA)


VANDELS (VLT-VIMOS)

>40 normal programs


## GRANTS AND PROJECTS (PI)

ELSA |  | *Euclid Legacy Science Advanced analysis tools*

 2024 – 2027

- *Call: HORIZON-CL4-2023-SPACE-01*
- *Project number: 101135203* | 
- *Awarded funding: €1.5M*


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

 2019 – present

## MAIN RESEARCH COLLABORATIONS

### Active collaborations

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

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

- *Coordinator of the Euclid DR1 Science Key Project DR1-KP-GEV-4 'The baryon cycle through scaling relations' (with A. Enia and I. Momcheva)*
- *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; with A. Feltre since 2024)*
- *Coordinator of the Euclid Pre-Launch Science Key Project KP-GEV-1 "Simulated Euclid data for galaxy & AGN evolution" (with M. Huertas-Company)*

MIGHTEE |  | *MeerKAT International GHz Tiered Extragalactic Exploration*

MOONRISE |  | *The Main MOONS GTO Extragalactic Survey*

- *Coordinator of the Technical Working Group 23b "Euclid: input sources and ancillary data" (with W. Hartley)*

### Past collaborations

ALPINE |  | *The ALMA [CII] Survey*

GMASS *Galaxy Mass Assembly ultra-deep Spectroscopic 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 the properties of the interstellar medium of a compact SFG at  $z \sim 2$

## CO-MENTORING MENTORING

### PhD:

Sapori (2024–present, UniBO)  
Behiri (2021–present, SISSA)  
Loiacono (2018–2021, UniBO)

### Master:

Nacciarriti (2022, UniBO)  
Mecoli (2021, UniBO)  
Behiri (2021, UniBO)  
Giulietti (2019, UniBO)  
Loiacono (2017, UniBO)  
Pantoni (2017, UniBO)

## 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

## PUBLIC OUTREACH

ELSA webinar | 🌐

Ri(e)voluzioni | 🌐

Aspettando Euclid | 🌐

Musical show | *The trip of Joe the Photon*

F. Gentile | PhD | Co-supervisor: Prof. A. Cimatti

📅 2021 – 2024

📍 University of Bologna, Italy

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

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*

M. Sapori | Master | Co-supervisors: Prof. F. Pozzi, F. Gentile

📅 2024

📍 University of Bologna, Italy

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

F. Fonzo | Master |

📅 2023

📍 University of Bologna, Italy

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

L. Parente | Bachelor |

📅 2024

📍 University of Bologna, Italy

*Classificazione e studio della relazione  $SFR-M_*$  di galassie a basso redshift dalla survey SDSS*

L. Ossino | Bachelor |

📅 2023

📍 University of Bologna, Italy

*Estimate of dust-corrected SFR from the  $H\alpha$  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*

## INVITED TALKS AND SEMINARS

- 2025 Feb. - Seminar at OPINAS at MPE & USM (Garching, Germany)
- 2023 Jun. - Lunch talk at ESO (Garching, Germany)
- 2022 Apr. - Plenary session talk at the Euclid Consortium annual meeting (Oslo, Norway)
- 2021 Jul. - Virtual seminar at OPINAS at MPE & USM
- 2021 May - Virtual talk for the AAS Journal Author Series | 🌐
- 2019 Nov. - Talk at the meeting ASPECS and ALMA large programs (Ringberg Castle, Germany)
- 2019 Jun. - Talk at the conference EWASS 2019 (Lyon, France)
- 2019 Jun. - Talk at the NORDITA program Zoom-In and Out: from the Interstellar Medium to the Large Scale Structure of the Universe (Stockholm, Sweden)
- 2018 Dic. - Talk at the meeting Science with multi-object spectrographs: perspectives and opportunities for the Italian community (Milano, Italy)
- 2018 Jul. - Cluster Colloquium at the Excellence Cluster Universe (Garching, Germany)
- 2018 May - Coffee talk at MPIA (Heidelberg, Germany)
- 2018 Apr. - Seminar at SISSA (Trieste, Italy)
- 2017 Jun. - Talk at the meeting Advances in Galaxy Evolution through a new Generation of Spectroscopic Surveys (Ringberg Castle, Germany)
- 2016 Dic. - Seminar at the Instituto de Física y Astronomía y Centro de Astrofísica de Valparaíso (Valparaíso, Chile)
- 2016 Nov. - ESO Colloquium at ESO Vitacura (Santiago de Chile)
- 2015 Jul. - Seminar at INAF (Padova, Italy)

18 contributed talks at international conferences