

# CURRICULUM VITAE ET STUDIORUM

**Carlotta Gruppioni**

## **Contact Information:**

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## **Education:**

- 1987** High School Degree at "Liceo Scientifico E. Fermi", Bologna. Score 56/60
- 1993** "Laurea" Degree in Physics at University of Bologna. Score 110/110 cum laude.  
Thesis Title: On Unified Models of Active Galactic Nuclei.  
Advisor: Prof. G. Setti
- 1997** PhD in Astronomy at University of Bologna.  
Thesis Title: Multi-frequency Study of a faint radio-galaxy and AGN sample in the Marano Field.  
Advisors: Dr. G. Zamorani, Prof. G. Setti

## **Professional Career:**

- 1993-1996** PhD in Astronomy at University of Bologna.
- 1996-1998** Researcher Associate at Imperial College of Science, Technology and Medicine of London (UK) within the EC Training and Mobility of Researchers Network "European Large Area ISO Survey" (PI Prof. M. Rowan-Robinson).
- 1998** Agenzia Spaziale Italiana (ASI) Fellowship at Astronomical Observatory of Bologna within the project "Observational Cosmology with ROSAT" (Supervisor: Dr. Giovanni Zamorani).
- 1999-2000** CNAA PostDoctoral Fellowship at Astronomical Observatory of Bologna with a project entitled "Faint radio sources in the Mid- / Far-Infrared".
- 2000** taking up of permanent position as staff Researcher Astronomer at Astronomical Observatory of Padova.
- 2003 to date** Staff Researcher Astronomer at INAF - Astronomical Observatory of Bologna

## **Main Scientific Interests:**

- Unified Models of AGN.
- Deep Multi-wavelength Surveys and Nature of Faint Sources.
- Galaxy and AGN Formation and Evolution.
- Statistical Methods (Source Counts, Luminosity Functions).
- Spectral Energy Distributions of Galaxies and AGN.
- Infrared Surveys and Instrumentation.

## **Scientific Activity:**

- 60 papers in major peer reviewed journals (of which 10 as first author);
- About 5 invited reviews/talks at national/international conferences;
- About 10 invited seminars/colloquia;
- Student Lectures:

**2002 October:** Lecture for PhD Students entitled "Deep Surveys in the Radio and Infrared" at the University of Bologna

**2005 July:** Lecture for PhD Students entitled "Star formation across the bands and the Universe" at the University of Bologna

**2006 October:** Lecture for High School Students entitled "Active Galaxies out of Visual Bands" at Osservatorio Astronomico di Loiano (Bologna)

**2007 June:** Lecture for PhD Students entitled "AGN in the Spitzer era: unveiling obscured accretion" at the University of Bologna

**2007 October:** Lecture for PhD Students entitled "Formation and evolution of galaxies from infrared and radio surveys"

**2008 April:** Two series of Lectures for Primary School Students entitled "Alla Scoperta del Cielo"

### **Professional Activities:**

- 1996-2000** Member of the European Large Area ISO Survey (ELAIS) Consortium
- 1998 to date** Referee for Monthly Notices of the Royal Astronomical Society
- 1999** Organizer of the ELAIS Consortium Meeting, Bologna, October 16-19
- 2000-2004** Member of the POE International Consortium
- 2000 to date** Peer Reviewer for Astronomy & Astrophysics
- 2002 to date** Member of the PACS Evolutionary Probe (PEP) Consortium and leader of the Luminosity Function WG
- 2005 to date** Peer Reviewer for Astrophysical Journal Letters
- 2008 to date** Member of the SPICA-SAFARI Consortium for the scientific exploitations of an European spectro-photometer (SAFARI) for a future Japanese mission (SPICA)
- 2010** Logistic organization of the 9<sup>th</sup> Italian Workshop on AGN, Ferrara, May 24-27

### **Observational and Data Experience:**

- Interferometric radio observations (ATNF/ATCA) and data reduction (MIRIAD, AIPS).
- Optical Spectroscopy (ESO/3.6-m, AAO/2dF) and data reduction (IRAF).
- ISOCAM survey data reduction and analysis; specific software development (IDL).
- Spitzer and Herschel data analysis (IDL).

### **Student Fellows:**

Advisor of the following Degree Thesis:

- M. Cirasuolo ("Evolution of Radio Selected Starburst Galaxies", a.a. 1998/99, score 110/110 cum laude)
- S. Giannetto ("Spectral Properties from X-rays to Far-Infrared of a AGN sample in the XMM/ELAIS-S1 Survey", a.a. 2006/2007, score 103/110)
- F. Ziparo ("Broad-Band Spectral Properties of Extremely Red Objects in the COSMOS Survey", a.a. 2007/2008, score 110/110)
- V. Morana ("Spectral Energy Distributions of sub-mm Sources", expected final date: October 2010)

Supervisor of the following PhD Thesis:

- F. Pozzi ("The European Large Area ISO Survey (ELAIS): Southern Field at 15 micron". December 1998 - December 2001)
- H. Dominguez-Sanchez ("Luminosity function of FIR galaxies and AGN as a function of redshift". Start: January 2009. Selected by IAC Spain under an International Agreement)

### **Main research funds:**

- 1996-1998** Marie Curie Research Training and Mobility Grant of the European Community.
- 2002-2004** COFIN MIUR 2002 *Multiwavelength surveys and the evolution of the accretion and star-formation in the Universe*, PI A. Franceschini.
- 2003-2005** COFIN MIUR 2003 *The X-ray view of the accretion history in the Universe*, PI G. Matt.
- 2005-2007** PRIN INAF 2005 entitled *Preparazione per ALMA*, PI M. Walmsley.
- 2006** ASI-INAF grant I/O23/O5/O, *Supporto all'analisi dati nel campo dell'astrofisica delle alte energie*, PI A. Comastri.
- 2006-2008** PI of the PRIN-INAF 2006 *Galaxy Evolution from the Early Phases to the Actual Universe: the IR and sub-millimeter view and preparation for Herschel*.
- 2008-2009** Local Coordinator of the ASI grant *SPICA-SAFARI*, WP 6100, PI L. Spinoglio.
- 2010-2011** PRIN INAF 2009 *The e-MERlin Galaxy Evolution Survey (e-MERGE). Physics and evolution of star forming and accretion-dominated galaxies up to redshift z~5, through very deep high resolution radio imaging*, PI I. Prandoni.

### **Selected Publications:**

1. First Herschel probe of dusty galaxy evolution up to z~3,  
**C. Gruppioni**, F. Pozzi, P. Andreani, G. Rodighiero, A. Cimatti et al., *A&A Special Issue*, in press, arXiv:1005.1473
2. The Contribution of AGNs and Star-forming Galaxies to the Mid-Infrared as Revealed by Their Spectral Energy Distributions,  
**C. Gruppioni**, F. Pozzi, M. Polletta, G. Zamorani, F. La Franca et al., *ApJ*, 2008, 648, 136
3. Hidden activity in high-redshift spheroidal galaxies from mid-infrared and X-ray observations in the GOODS-North field,  
G. Rodighiero, **C. Gruppioni**, F. Civano, A. Comastri, A. Franceschini, M. Mignoli, J. Fritz, T. Treu, 2007, *MNRAS*, 376, 416
4. Extragalactic Source Counts in the Spitzer 24 Micron Band: What Do We Expect from ISOCAM 15 Micron Data and Models?,  
**C. Gruppioni**, F. Pozzi, C. Lari, S. Oliver, G. Rodighiero, 2005, *ApJL*, 618, L9

5. The Mid-Infrared Luminosity Function of Galaxies in the European Large Area Infrared Space Observatory Survey Southern Fields,  
F. Pozzi, **C. Gruppioni**, S. Oliver, I. Matute, F. La Franca, C. Lari, G. Zamorani, S. Serjeant, A. Franceschini, M. Rowan-Robinson, 2004, *ApJ*, 609, 122
6. The radio-mid-infrared correlation and the contribution of 15- $\mu$ m galaxies to the 1.4-GHz source counts,  
**C. Gruppioni**, F. Pozzi, G. Zamorani, P. Ciliegi, C. Lari, E. Calabrese, F. La Franca, I. Matute, 2003, *MNRAS*, 341, L1
7. A new method for ISOCAM data reduction - II. Mid-infrared extragalactic source counts in the ELAIS Southern field,  
**C. Gruppioni**, C. Lari, F. Pozzi, G. Zamorani, A. Franceschini, S. Oliver, M. Rowan-Robinson, S. Serjeant, 2002, *MNRAS*, 335, 831
8. The local star formation rate and radio luminosity density,  
S. Serjeant, **C. Gruppioni**, S. Oliver, 2002, *MNRAS*, 330, 621
9. A new method for ISOCAM data reduction - I. Application to the European Large Area ISO Survey Southern Field: method and results,  
C. Lari, F. Pozzi, **C. Gruppioni**, H. Aussel, P. Ciliegi, L. Danese, A. Franceschini, S. Oliver, M. Rowan-Robinson, S. Serjeant, 2001, *MNRAS*, 325, 1173
10. A 1.4-GHz survey of the southern European Large-Area ISO Survey,  
**C. Gruppioni**, P. Ciliegi, M. Rowan-Robinson, L. Cram, A. Hopkins, 1999, *MNRAS*, 305, 297
11. Optical identifications and spectroscopy of a faint radio source sample: the nature of the sub-mJy population,  
**C. Gruppioni**, M. Mignoli, G. Zamorani, 1999, *MNRAS*, 304, 199
12. Radio observations of the Marano Field and the faint radio galaxy population,  
**C. Gruppioni**, G. Zamorani, H.R. de Ruiter, P. Parma, M. Mignoli, C. Lari, 1997, *MNRAS*, 286, 470