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# CURRICULUM VITAE ET STUDIORUM

**Myriam Gitti**

## Contact Information :

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## Education :

**2003** : PhD in Astronomy, University of Bologna  
Thesis title: *“Particle Acceleration in Clusters of Galaxies and Physical Connection between Cooling Flows and Radio Mini-Halos”*  
Advisors: Prof. G. Setti, Dr. G. Brunetti  
**1999** : *“Laurea”* in Astronomy, University of Bologna, final grade: 110/110 *magna cum laude*  
Thesis title: *“Possible Effect of Cooling Flows on the Radio Emission from Clusters of Galaxies”*  
Advisors: Prof. G. Setti, Dr. G. Brunetti  
**1994** : *“Diploma di maturità scientifica”*, final grade: 60/60

## Fellowships and Career History :

**2010 to date** : Post-doc position, INAF - Osservatorio Astronomico di Bologna (Italy)  
SAO Research Associate, Harvard-Smithsonian Center for Astrophysics (MA, USA)  
**2008-2010** : Visiting Scientist, Harvard-Smithsonian Center for Astrophysics (MA, USA)  
**2008-2009** : Post-doc position, Dept. of Astronomy - University of Bologna (Italy)  
**2006-2008** : Post-doc fellowship, INAF - Osservatorio Astronomico di Bologna (Italy)  
**2005-2006** : Post-doc position, Dept. of Physics & Astronomy, Ohio University (OH, USA)  
**2003-2005** : Post-doc position, Institute of Astro- and Particle Physics, University of Innsbruck (Austria)

## Research Interests :

Properties and evolution of Clusters and Groups of Galaxies and the Intra-Cluster Medium derived from multi-wavelength observations: interaction between thermal plasma and relativistic plasma, X-ray cavities and radio bubbles observed in cool core clusters and groups, non-thermal emission from galaxy clusters, radio mini-halos and reacceleration of relativistic particles, mass determination of galaxy clusters from X-rays and comparison with gravitational lensing studies.

## Scientific Activity :

- About 30 papers in international journals (of which 9 as first author in major peer reviewed journals)
- About 7 talks at international conferences
- About 10 invited seminars/colloquia

## Professional Activities :

- Panelist at the Chandra Cycle 10 Peer Review in the category: ‘Clusters of Galaxies’
- Referee for ApJ and MNRAS since 2007
- Lecturer for Doctoral Degree Program (University of Cagliari, Italy, 05/2007)
- Member of the judging committee of PhD Thesis (University of Granada, Spain, 11/2004)

## Teaching Experience and Public Outreach :

Scientific advisor and co-tutor of Diploma and PhD Theses of several students at the University of Bologna and at the University of Innsbruck. Scientific guide to schools visiting the “Northern Cross Radiotelescope” operated by the Institute of Radioastronomy in Bologna.

## Approved Observing Proposals as Scientific P.I. :

- **Instrument: Chandra**  
*“Investigating AGN feedback in cool cores detected in H $\alpha$ ”* [2009], obs. time: 44 ks

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- **Instrument: XMM-Newton**  
“AGN Feedback and Star Formation in the Cooling Flow Cluster RBS 797” [2006], obs. time: 73 ks
  - **Instrument: VLA**
    - “Investigating AGN feedback in cool cores detected in H $\alpha$ ” [2009], obs. time: 3 h
    - “Solving the puzzle of the peculiar radio source in the cool core cluster A2626” [2008], obs. time: 19 h
    - “Relativistic Plasma and ICM in CF Clusters analyzed through Radio Mini-Halos” [2006], obs. time: 26 h

#### Funded Research Projects as P.I. :

- **Chandra Cycle 11 observing proposal**  
title: “Investigating AGN feedback in cool cores detected in H $\alpha$ ”; approved grant: US\$ 36,877
- **INAF Post-doc fellowship 2005**  
title: “Thermal Intra-Cluster Medium and Relativistic Plasma in Cooling Flow Clusters of Galaxies Analyzed through Radio Mini-Halos”; approved grant: EUR 50,000
- **Project CNR - Agenzia 2000**  
title: “Mergers of Galaxy Clusters and Acceleration of Relativistic Particles”; approved grant: EUR 7,747
- **Young Researcher Project - Grant e.f. 1999 MURST**  
title: “Interaction between ICM and Relativistic Plasma in Clusters of Galaxies”; approved grant: EUR 2,582

#### Selected Scientific Publications :

1. “Cavities and shocks in the galaxy group HCG 62 as revealed by Chandra, XMM and GMRT data”, **Gitti M.**, O’Sullivan E., Giacintucci S., David L., Vrtilik J., Raychaudhury S., Nulsen P. 2010, ApJ, 714, 758
2. “Direct Evidence for Outflow of Metal-Enriched Gas along the Radio Jets of Hydra A”, Kirkpatrick C., **Gitti M.**, Cavagnolo K., McNamara B., David L., Nulsen P., & Wise M., 2009, 707, L69
3. “A morphological comparison between giant radio halos and radio mini-halos in galaxy clusters” Cassano R., **Gitti M.**, & Brunetti, G., 2008, A&A, 486, L31
4. “Mass distribution in the most X-ray-luminous galaxy cluster RX J1347.5-1145 studied with XMM-Newton”, **Gitti M.**, Piffaretti R., & Schindler S., 2007, A&A, 472, 383
5. “Discovery of diffuse radio emission at the center of the most X-ray-luminous cluster RX J1347.5-1145”, **Gitti M.**, Ferrari C., Domainko W., Feretti L. & Schindler S., 2007, A&A, 470, L25
6. “ARCRAIDER I: Detailed Optical and X-ray Analysis of the Cooling Flow Cluster Z3146”, Kausch W., **Gitti M.**, Erben T., & Schindler S., 2007, A&A, 471, 31
7. “Cosmological Effects of Powerful AGN Outbursts in Galaxy Clusters: Insights from an XMM-Newton Observation of MS 0735+7421”, **Gitti M.**, McNamara B., Nulsen P., & Wise M., 2007, ApJ, 660, 1118
8. “Multifrequency VLA radio observations of the X-ray cavity cluster of galaxies RBS 797: evidence for differently oriented jets”, **Gitti M.**, Feretti L. & Schindler S., 2006, A&A, 448, 853
9. “XMM Newton observation of the most X-ray-luminous galaxy cluster RX J1347.5-1145”, **Gitti M.** & Schindler S., 2004, A&A, 427, L9
10. “Feedback from Intra-Cluster Supernovae on the ICM in Cooling Flow Galaxy Clusters”, Domainko W., **Gitti M.**, Schindler S. & Kapferer W., 2004, A&A, 425, L21
11. “Particle acceleration in cooling flow clusters of galaxies: the case of Abell 2626”, **Gitti M.**, Brunetti G., Feretti L., & Setti G., 2004, A&A, 417, 1
12. “Modeling the interaction between ICM and relativistic plasma in cooling flows: the case of the Perseus Cluster”, **Gitti M.**, Brunetti G., & Setti G., 2002