

Curriculum vitae

di Benedetta Vulcani

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Studies

- **January 2009 -:** I'm a graduate student and I'm enrolled at the second year of the PhD school in Astronomy of the Univeristy of Padova. I carry on my research at the Astronomical Observatory of Padova INAF. I'm collaborating with dr. Bianca Maria Poggianti and I'm carrying on a research on the galaxy properties in clusters. The main aim of my PhD thesis is: "The evolution of the galaxy mass assembly and star formation activity from $z=1$ to $z=0$ as a function of environment". Now I'm analyzing the star formation rate in clusters and comparing them with the sane quantity in the field. I'm also studying the mass distribution the ellipticity distribution of cluster galaxies at different redshifts, in order to characterize their evolution. My research is based on the analysis of three surveys: the WIde-field Nearby Galaxy-cluster Survey (WINGS) ($0.04 \leq z \leq 0.07$) (Fasano et al. 2006, AAp 405, 805), the ESO Distant Cluster Survey (EDisCS) ($0.4 \leq z \leq 0.8$) (White el al. 2005, AAp, 444, 365) and the IMACS Cluster Building Survey (ICBS)($0.4 \leq z \leq 0.8$) (Dressler et al, in preparation).
- **October 2006 - September 2008:** I attended to the course of study of the Master's degree in Astronomy at the University of Padova. I concluded my career in 2010, October, on 14th (110/110 cum laude). My thesis was "Mineralogical analysis of asteroids near the main Main-Belt resonances and their possible contribution to the origin of Near Earth Objects" (supervisor dr Monica Lazzarin, in collaboration with IAC (España)). There I carried on a mineralogical analysis of the Small Bodies of the Solar System, performing a

spectroscopic analysis. I reduced the spectra in the visible and IR and for the analysis I followed the method proposed by Gaffey et al. (2002, Mineralogy of Asteroids, in Asteroids III, pp. 183-204). The main aim of my thesis was to understand if the asteroids of the Inner Main Belt show the same mineralogical composition of the Near Earth Objects (NEO) and so if they could be their progenitors.

- **October 2003 - September 2006:** I attended to the course of study of the Bachelor degree in Astronomy at the University of Padova. I concluded my career in 2006, September on 21st (108/110) with a thesis with the title “Interstellar Dust in the Solar System” (“Polveri interstellari all’interno del Sistema Solare”) (supervisor prof. Sergio Ortolani).
- **July 2003:** I concluded my High School focusing on science at “Guglielmo Oberdan” in Trieste (Italy) (100/100).

Other experiences

- **March 2010 -:** I’m carrying on part of my PhD project at The Observatories of Carnegie Institution of Washington, Pasadena (CA). I’m collaborating with dr. Alan Dressler and with dr. Augustus Oemler. My research is focused on the study of the galaxy infall and evolution from the outskirts into the cluster cores
- **March - September 2008:** I spent 7 months at the “Instituto Astrofisico de Canarias” (Universidad de La Laguna, Tenerife, España), thanks to the Erasmus program. I collaborated with dr. Javier Licandro and dr. Julia de León. There I carried on mostly of my Master-s degree thesis. In the same time I also went to observe with the William Herschel telescope and Telescopio Nazionale Galileo, at the “Observatorio Roque de los Muchachos” (La Palma, España). I performed to cycles of observations of Small Bodies of the Solar System (NEO asteroids and comets) both using the imaging technique and spectroscopy (visible and infrared).

Foreign Languages

Italian native speaker, I have a good knowledge of English, both oral and written and a very good knowledge of Spanish, both oral and written.

Computer experties

I have experties of the systems Windows XP, Linux, Mac Os X and of softwares IRAF, Supermongo, Python, Matlab, C++ and IDL.

Conferences and PhD schools

I attended to the following Conferences and PhD schools:

- **Conference: “Unveiling the mass: extracting and interpreting galaxy masses** (06/15-06/19 2009 - Kingston (Canada)). I presented a poster “Mass functions of red and blue galaxies as a function of redshift and environment”.
- **Conference: Galaxy properties across cosmic ages** (04/28 - 04/29 - Roma). I presented a poster “Mass functions of red and blue galaxies as a function of redshift and environment”
- **Euro VO Aida School 2009** (03/30 - 04/02 2009 - ESO Garching (Monaco-Germania)).
- **Conference: CL J2010+0628: from Massive Galaxy formation to Dark Energy** (06/28- 7/2 2010- Kashiwa, Japan). I presented a poster “Galaxy stellar mass functions of different morphological types, and their evolution between $z=0.8$ and $z=0$ ”.

References

- Vulcani, B., Poggianti, B. M., Finn, R. A., Rudnick, G., Desai, V., & Bamford, S. 2010, ApjL, 710, L1