

## **ALVIO RENZINI: Two-Page CURRICULUM VITAE**

*(Born in Venice, on July 6, 1940, and living there)*

**Present position:** Associate Scientist to the National Institute of Astrophysics (INAF), at the Astronomical Observatory of Padova, Italy.

**Main Research activity and achievements in the following areas:** Formation and evolution of galaxies – Surveys of high redshift galaxies – Stellar Populations – Chemical evolution up to the scale of clusters of galaxies – Elliptical galaxies in X-rays – Formation of the Galactic Bulge – Stellar Nucleosynthesis – Type Ia Supernovae – Globular Clusters – Theory of stellar structure and evolution. This wide theoretical and observational experience in such different fields of astrophysics is a specific characteristics of my scientific profile.

### **Educational Background**

1963: Physics Degree, University of Pisa;

Physics Diploma, Scuola Normale Superiore of Pisa

1971: Libera Docenza (Venia Docendi) in Astrophysics, University of Bologna

### **Employment Background**

1964-65 Fellowship of the “Scuola Normale Superiore” of Pisa

1966 Researcher of the National Institute of Nuclear Physics (INFN), Rome.

1967-80 Astronomer at the Astronomical Observatory of Bologna (Italy)

1970-80 Associate Professor of Theoretical Astrophysics, University of Bologna

1979 Visiting Professor, University of California, Santa Cruz

1980-95 Full Professor of Theoretical Astrophysics, University of Bologna

1980-95 Director of the Astronomy Department and/or the Astronomical Observatory at Bologna

1995-05 VLT Program Scientist, European Southern Observatory (ESO), Garching

2005- Retired from above positions, now Associate Scientist, INAF, Astronomical Obs. of Padova.

1976-2016 Visiting Scientist at: Yale University (1976), STScI (1985), ESO (1987, 1989, 1993, 2007,

2012, 2015), Anglo-Australian Observatory (1991), Caltech (1993), Japan Society for the Promotion

of Science (1994), National Astronomical Observatory of Japan (2004, 2007, 2008, 2011, 2013,

2016), Carnegie Observatories (2004), ETH-Zurich (2009, 2010, 2011, 2012, 2013), CEA-Saclay

(2012), PUC, Santiago, Chile (2011, 2013), Kavly Inst. IPMU, Tokyo (2013).

**Current Activities:** Since my retirement in 2005, free from teaching, administrative or functional duties, I am full time on active scientific research.

### **Awards and Honors**

1991 Prize “A. Feltrinelli”, Accademia Nazionale dei Lincei

1992- Member of the “Accademia Nazionale dei Lincei”,

1994 Grubb-Parsons Lecturer, University of Durham

2004- Member of the “Istituto Veneto di Scienze, Lettere e Arti”

2014- Appointed “Commendatore” for scientific merits by the President of the Italian Republic

2016- Honorary Member of the Royal Astronomical Society

**Committee memberships:** Formerly, ESO Observational Program Committee (OPC), Hubble Space Telescope (HST) User Committee, HST Time Allocation Committee, Italian Committee for the Evaluation of Research (CIVR), Scientific Council of the National Institute of Astrophysics (INAF). Currently Reviewer for the Astrophysical Journal, Astronomy & Astrophysics, Nature, Science, Monthly Notices of the Royal Astronomical Society, NOVA, Swiss National Science Foundation and for the European Research Council. Chair of the OPC of ESO in 2015, Subaru Telescope 2016.

### **International Conferences:**

Organizer and/or Chair of several International Conferences (about twenty in the last 40 years).

## Publications

Over 370 publications on refereed journals, over 400 other scientific publications, in the fields of stellar evolution, stellar populations, galaxy formation and evolution, and cosmology. Total citations: **40,000, h index 106**, According to ISI-Reuters 2001 Highly Cited researchers, one of the 100 most cited scientists in "Space Science", and most cited Italian scientist in these disciplines. According to Thomson-Reuters 2014, one of the 100 most influential scientists in the decade 2002-2012 in "Space Science". Editor of some 20 Conference Proceedings. Co-author of the textbook *Stellar Populations, A User Guide from Low to High Redshift*, 2011, Wiley-VCH, Berlin.

During the last decade, working in numerous teams with younger people I figure rarely as the first author of the papers. If I figure out within the first ~five co-authors, it means that I had a major role in conceiving the project, drafting the corresponding observational proposal and/or drafting the paper. Otherwise, my role was more one of an *enabler*, e.g., having participated in conceiving a multipurpose survey, but not the specific project presented in a particular paper.

## Mentoring activity

Here listed are the scientists that I have mentored as thesis advisor, senior co-authors of their first paper(s) when they were undergraduate/graduate students or postdocs, or very early in their career. The present position is indicated along with the dates during which the mentoring activity took place.

**Mariangela Bernardi**, Associate Professor, University of Pennsylvania, 1997-98; **Angela Bragaglia**, Astronomer, INAF - Osservatorio Astronomico di Bologna, 1987-1989; **Alberto Buzzoni**, Associate Astronomer, INAF - Osservatorio Astronomico di Bologna, 1984-1986, **Michele Cappellari**, Fellow of the Royal Society, University of Oxford, 1995-1996, **Maria Rosa Cioni**, Senior Lecturer, University of Hertfordshire, 1993-94; **Luca Ciotti**, Full Professor, University of Bologna, 1989-1993; **Emanuele Daddi**, Senior Researcher, Service D'Astrophysique, Saclay, 2001-04; **Lilia Ferrario**, Associate Director Education, Australian National University, 1983-84; **Francesco Ferraro**, Full Professor, University of Bologna, 1987-88; **Flavio Fusi Pecci**, Full Astronomer, INAF - Osservatorio Astronomico di Bologna, 1973-1976; Daichi Kashino, Post-Doc, ETH Zurich, 2013-2014; **Xu Kong**, Professor at the University of Hefei, China, 2005-2006; **Chiara Mancini**, Post-Doc, University of Padova, 2009-2014; **Claudia Maraston**, Full Professor, University of Portsmouth, 1994-98; **Masato Onodera**, Astronomer, National Astronomical Observatory of Japan, 2006-2013; **Silvia Pellegrini**, Researcher, University of Bologna, 1989-93; **Yingjie Peng**, Assistant Professor, Kavli Institute, Beijing, 2010-2013; **Giulia Rodighiero**, Researcher at the University of Padova, 2009-2012; **Letizia Stanghellini**, Associate Astronomer, NOAO, Tucson, 1983-85; **Manuela Zoccali**, Full Professor, P. Universidad Catolica, Chile, 1999-2004.

**Instrumentation** (During the decade spent at ESO I was heavily involved in the scientific evaluation of instrumentation for the VLT. Here are the instrumentation activities undertaken after I left ESO):

2008-2010: Project Scientist for the **MIKADO** high-resolution/wide field near-IR camera for the European Extremely Large Telescope (E-ELT);

2012-: Science driver for **MOONS**, Multi-Object Optical and Near-infrared Spectrograph for the VLT.

## Main ongoing Observational Programs

Among the "**Enablers**" of major multiwavelength/multifacility Project such as **GOODS, COSMOS, zCOSMOS and CANDELS**; PI of the ESO Large Program **SINS/zC-SINF** for the integral field spectroscopy of redshift  $\sim 2$  galaxies with SINFONI at the VLT; Co-PI of the **FMOS-COSMOS Intensive Project** at the Subaru Telescope on redshift  $\sim 1.6$  galaxies with the FMOS multiobject near-IR spectrograph; CoI of the **PHIBSS2** Large Program on redshift 0.7-3 galaxies with the IRAM interferometer; CoI of the HST Treasury Program on multiple stellar populations in globular clusters; CoI of the ESO Large Program **HUGS**, the HAWK-I Ultradeep (UDS) and GOODS Surveys with the HAWK-I near-IR imager at the VLT; CoI of the **GIBS** Large Program at the VLT on the mapping of kinematics and composition of stars in the Galactic bulge; PI of several normal programs at HST and the VLT.