CURRICULUM VITAE ET STUDIORUM
Dr. Giampaolo Vettolani

Personal Data

GIAMPAOLO VETTOLANI, born in Bologna December 27, 1950

Italian Citizen

Residence	via Achillini 10 40137 Bologna	
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Education

Laurea in Fisica cum laude at the Universita' di Bologna, December 12, 1973

Employments

1974 - 1976	Research Fellow at the Istituto di Astronomia dell' Universita' in Bologna
1976 - 1988	Researcher at the Istituto di Radioastronomia del CNR in Bologna
1979 - 1980	Contract Professor at Bologna University (Radioastronomy)

1984	Unpaid Associate at ESO (European Southern Observatory)
1988 - 1991	Associate Researcher at the Istituto di Radioastronomia del CNR, Bologna
1991 - 2003	Research Director at the Istituto di Radioastronomia del CNR, Bologna
2003 – 2010	Director Department of National Projects at INAF HQ Rome.
2011– 2016	Director for Science at INAF HQ Rome
2016 -	Quiescent

Professional Activities

1991-1993 Member of the Scientific Committee for the FUEGOS Spectrograph for the ESO Very Large Telescope

1992- 1996 Member (deputy) of the ESO Observing Program Committee

1992-1998 Member of Commissione ESO (ESO Committee) of the Italian Ministry of Foreign Affairs.

1994-1999 Member of the National Physics Committee of the Consiglio Nazionale Ricerche (CNR Italy)

1996-1999 Member of the ESO Observing Program Committee

1998-2001 Member of the National Codata Committee

1999-2002 Member of the Coordinating Committee CNR-INFN

2001-2003 Member of the International Scientific Advisory Committee for the Square Kilometer Array

2003-2004 Member of the expert Group of OECD-Global Science Forum for "Large-Scale Programmes and Projects in Astronomy and Astrophysics

2003-2006 Member of the International Committee for Astronomy in Canary Islands (CCI)

2003–2010 Member of the Board of LBT Corporation

2003– 2012 Member of the Opticon Board and Opticon Executive Committee

2003–2010 Member of the steering committee for ELT (Opticon and EC FP6 and FP7 design Studies)

2005–2015 Member of the ASTRONET Board (EC DG XII)

2007-2016 Italian Representative in the Astronomy Informal European Agencies Group

2007–2008 Member of the expert Group of OECD-Global Science Forum & European Commission DG XII for "Roadmapping in Sciences"

2008–2010 Member of the Board of Prep SKA

2009 Member of the expert Group of OECD-Global Science Forum "Establishing Large International Research Infrastructures"

2010-2016 Member of SKA Ltd Board

2009-2014 Chair and Vice Chair of CTA Resource Board

2015-2018 Chair and Vice Chair of the Board of CTA gGmbH

2016-2021 Document Holder SKA Ltd Board

2016 - 2021 Member of the Board of the "Galileo Galilei Foundation" Canary Islands, Spain

2018- Member of the "Accademia delle Scienze Università di Bologna"

2019 - Consultant CTAO GmbH for the transition to CTAO Eric

Publications

Dr. Vettolani is author of three books (one as editor and two as author), 150 refereed papers and more that 150 contributions to conferences, 11 technical papers and a number of miscellaneous contributions (IAU Circulars, Messenger Papers, technical manuals, design reports, etc)

Research Activity

The main research field of Dr. Vettolani is in observational cosmology: large scale structure of the Universe, clusters and superclusters of galaxies, faint radio surveys. Results have been obtained both through the analysis of the observational data, the astrophysical modeling and the construction of the instrumentation.
As to large scale structure , research work dates back to the late 70's when the concept of Large Scale Structure (LSS) was just coming into a paradigm in observational cosmology. Relevant work to be mentioned was about the Perseus Supercluster, the definition of voids and isolated galaxies and the compilation of the "Catalogue of Radial Velocities of Galaxies" (Gordon &Breach, New York) which, in 1983, depicted the state of the art in galaxy redshift measurement when the dramatic technological improvements in spectrographs gave origin to the so called redshift industry.
In the 80's the research activity was mainly on clusters of galaxies as tracers of the large scale structure (identifications of superclusters, anisotropy of the distribution and large scale motions) and on the study of their physical properties (characteristics of their dominant galaxies, mass and chemical composition) using samples of optically selected clusters (ACO) and X-Ray selected clusters (EMSS and Rosat). Notable here is the discovery and the following studies of the Shapley Concentration and the study of the large scale motions in the direction of the Great Attractor.
In the 90's Dr. Vettolani led the first redshift survey in continental Europe, the ESO Slice Project (ESP) taking advantage of the new multifiber spectrograph (Octopus) at the 3.6 meters ESO telescope in La Silla. The ESP project gave notable results as f.i.. the first really accurate B band local galaxy luminosity function. The same large strip of ESP was also surveyed in radio with the Australia Radio telescope to tackle the problem of the nature of the population of faint radiosources responsible of the steeping of radio source counts at low fluxes. It is worth noting that this was one of the first attempts to make profit of an existing survey of galaxies for which photometric and spectroscopic data were already available to perform on the same area a survey in another band largely alleviating the follow up necessity and having at hands clean well characterized samples, a recipe largely applied nowadays.
At the end of the 90's it became clear that a major step was necessary in the spectroscopic instrumentation for redshift surveys at faint magnitudes and high z. This led to the concept of the VIMOS spectrograph for the VLT which was approved by ESO and constructed by a French Italian consortium of which Dr. Vettolani was CoPI . Besides many technical difficulties VIMOS in the years proved to be the best existing spectrograph for faint galaxies redshift surveys thanks to its high multiplex gain and sensitivity. VIMOS has been decommissioned from the VLT in 2019 after having proved to be one of the most productive instruments at ESO Observatories.
At the completion of the spectrograph the same consortium has stared the Vimos VLT Deep Survey (VVDS) aimed to trace the evolution of galaxies and large scale structures over more of 90% of life of the Universe. and has produced more than 65.000 redshifts in the z range from 0 to 5.
The VVDS has produced a wealth of results, including a comprehensive view of the luminosity and stellar mass evolution as a function of galaxy type up to z 2, a detailed

look at the evolution of galaxy clustering as a function of mass type and population and a complete census of the actively star forming population of galaxies and type 1 AGN's up to redshit.5.
Some of the areas of the VVDS survey have been observed in radio at the VLA to very faint flux limits as well as with XMM Newton in X Rays, by SWIRE in far IR and Galex in the UV and well as with the Hubble Space telescope (COSMOS Legacy Survey).
From the takeover of the managing positions at INAF HQ in the early first decade of 2000 the scientific activity has been declining as other duties have taken over, nonetheless the H index for Dr. Vettolani is still 60.

Management Activities

In the 90's , as member of the Comitato Nazionale Scienze Fisiche del CNR (running at that time about 30 labs with more than 600 researchers in material science, atmospheric physics and astronomy) Dr. Vettolani has gained considerable experience on budget formulation, personnel handling, funds allocation, evaluation and control of scientific and technological activities.

From 2003 to 2016, as Director of the Department of National projects at INAF and later as Science Director, Dr. Vettolani has been responsible of coordination, development construction and operation of all national INAF observational facilities (telescopes and instrumentation) both ground based (TNG, LBT) and space based and of the Italian participation in the new multinational facilities as the ESO ELT, the Square Kilometer Array (SKA), the largest world radio astronomy facility, and CTA the new set of telescopes for gamma-ray observations from the ground.

He has been also responsible of the planning, financing, budgeting , and human resources allocation of all research infrastructures of INAF with a yearly budget of the order of 30 Million Euros.

At the international level Dr. Vettolani has contributed to the definition of the Astronomy roadmapping (both scientific and infrastructural) through participation as expert to the dedicated initiatives of the OECD Global Science Forum and at national level as Italian representative and head of delegation in the Astronet Board, the EC DG XII initiative for science and infrastructural road mapping of Astronomy in Europe.

After retirement in 2016 his activity is mostly dedicated to the managerial organization of SKA (up to 2021) and CTA (as of today) as Consultant to both Organizations and their Councils.

Other acitivities

Dr. Vettolani has been member of a number of Scientific Organizing Committees conferences both in Italy and abroad "as f.i. "Wide Field Spectroscopy" (Athens 1996) , "Tracing the Dark and Bright Matter with the New Generation Of Large Scale Surveys"(Marseille 2000) and "Maps of the Cosmos" (IAU Symposium 213 Sidney 2003).

His didactic activity has mostly consisted in the tutoring of students both for the Laurea and the Ph.D.. He taught special courses for Ph.D. students in a number of Italian Universities and contributed to the organization of some National Schools.

The outreach activity towards the general public has been exploited through the organization and lecturing in many circumstances. Other activities include the production of a movie to illustrate the astrophysical research connected to the Virmos spectrographs. This movie has been entitled second prize at the International Festival for Science Films in Parma (Italy) in 2001 (XL Prix Leonardo).
Finally he is coauthor of the book "perchè non costruisci un radiotelescopio" illustrating the development of radio astronomy in Italy up to the new millennium.

Bologna 18 giugno 2024

G. Vettolani