

Curriculum Vitae

Dr. Giovanni Vladilo, INAF - Osservatorio Astronomico di Trieste (OATs)
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Education. Doctor in Physics (Astrophysics) at the University of Trieste with 110/110, thesis supervisor Prof. Emeritus M. Hack (1981). Master at the International School for Advanced Studies (SISSA), thesis supervisor Prof. J. E. Beckman (1984).

Permanent Positions. Associate Astronomer at INAF-Trieste Astronomical Observatory (OATs) since 1996. Research Astronomer at OATs from 1985 to 1995.

Official charges and managing experience. Director of INAF-OATs since January 1st 2018. INAF-OATs “Vicario” (Director’s substitute; 2016-2017). Member of the Scientific Council of INAF-OATs (2005-2017). Deputy Director and member of the OATs directing board (1997-2001).

Main fields of research. Chemical abundances and physical properties of the interstellar and intergalactic medium; interstellar dust; high resolution spectroscopy of Galactic stars, extragalactic supernovae and quasars; observational studies of quasar absorption line systems; Damped Lyman alpha primordial galaxies: chemical abundances, ionization state and kinematics; dust in the distant Universe; cosmic evolution of metallicity and dust properties; comparison of high-redshift chemical abundances with models of galactic chemical evolution and cosmological simulations. Planetary habitability: development and application of climate models of terrestrial-type exoplanets. Physical limits of life and implications for planetary habitability. Habitable zones in the Galaxy.

Publications. Number of papers in international refereed journals: 90 (h -index=30). Total number of publications: 176 (with 2470 citations).

Referee activity. Referee in the peer review system for the following journals: *Astrophysical Journal*, *Astronomy & Astrophysics*, and *Monthly Notices of the Royal Astronomical Society*.

Participation in time allocation committees. TAC member of the Italian national facility Telescopio Nazionale Galileo (2002-2004). European Space Agency (ESA) member in Hubble Space Telescope TAC panel on the ISM (Cycle 8, 1999). International Scientific Committee of the Observatory of Canary Islands (1996-1998).

Observational experience. High resolution spectroscopy in the ultraviolet, optical and infrared spectral bands. Optical telescopes at the European Southern Observatory (ESO): 3.6m and NTT (La Silla, Chile), 8.2m VLT (Cerro Paranal, Chile); telescopes 2.5m INT and 4.2m WHT at La Palma Observatory (Spain). Ultraviolet spectrographs on board of space-borne facilities IUE, HST, and FUSE; guest observer at VILSPA ESA station (Madrid). Infrared spectrographs on board of the Spitzer telescope. Participation in large observational programs: SN1987a in LMC (ESO, 1987); ESO key program on Magellanic Clouds (ESO, 1990); SN1993j in M81 (IAC, Spain, 1993); ESO large program “The cosmic evolution of the intergalactic medium” (1999-2001). Search for infrared absorptions of interstellar silicates in high-redshift galaxies observed with the Spitzer telescope (2006-2010). Integral field spectroscopy of Damped Lyman alpha galaxies (2007-2011). “The UVES Large Program for testing fundamental physics” (2013-2014). “The ESO UVES advanced data products quasar sample”

(2014). “Demonstrating the Scientific Capabilities of JWST MIRI for Probing Distant Cosmic Dust and AGN Physics” JWST ERS (PI: V. Kulkarni, 2017).

Management of scientific projects. Responsible of the Work Package “Planetary Climate and Habitability” of the “Bando di Ricerca per Missioni Future di Esplorazione Umana dello Spazio” ASI (DC-VUM-2017-034; PI Silvano Onofri, Univ. della Tuscia).

Organization of scientific conferences. Scientific organization of the XVII International Conference on Science, Art and Culture (ECSAC; Lošinj, Croatia, September 2017). Scientific and local organization of the 3rd Workshop of the Italian Astrobiology Society (Duino Castle, Trieste, 2010) and of the 5th Workshop of the Italian Astrobiology Society (Trieste, SISSA, 2015). Local organizer of NATO Workshop “Progress in Stellar Spectral Line Formation Theory” (Grignano, Trieste, 1984).

Didactic activity. Master courses (“Laurea Specialistica”) at the Univ. of Trieste, Faculty of Mathematical, Physical and Natural Sciences: “Planets and Astrobiology” (2013-2017; currently 6 credits); “Astronomia Osservativa” (2010-2012; with prof. S. Cristiani). Master in Science Communication (SISSA, 2013). Ph.D schools: Italian National Schools for Astrophysics (1997, 2001), “International School of Space Science” (L’Aquila, 1992). Courses at the Dept. of Astronomy, Univ. of Trieste (1989-1991; 2007-2010).

Tutorship. Tutor of master thesis at the University of Trieste (Faculty of Mathematical, Physical and Natural Sciences): M. Pinamonti (2014), O. Osman (2014), S. Scarpato (2012), G. Ferri (2011), A. Mikosch Cuka (2011), C. Abate (2009), and C. Càssola (1992). Co-tutor of Ph.D thesis: L. Giannini (Faculty of Mathematical, Physical and Natural Sciences, Univ. Trieste, 2015-2017, with prof. F. Matteucci). Supervisor of Ph.D. thesis: M. Centurión (Universidad de La Laguna, Tenerife, Spain, 1991) and S. Monai (Department of Astronomy, University of Trieste, 1991). Tutor of “Laurea Triennale” at the University of Trieste (Faculty of Mathematical, Physical and Natural Sciences): S. Kodermaz (2010), L. M. Serrano (2013).

Didactic activity abroad. “Observational Methods in Astronomy” (45 hours) at the Dept. of Mathematics and Physics, Univ. of Ljubljana (Slovenia, 2016-2017). “Introduction to Astrobiology” (12 hours) at Instituto Nacional de Astrofísica, Óptica y Electrónica (Puebla, Mexico, 2015). Ph.D schools: Novicosmo Summer School (Rabac, Croatia, 2009). Courses on “The Interstellar and Intergalactic Medium” at Universidad de San Carlos de Guatemala (Guatemala; 2008) and Universidad Nacional Mayor de San Marcos (Lima, Perú, 2004).

Work and visits abroad. Queen Mary College, London (1984), invited by prof. J.E. Beckman. Visiting professor at the Instituto de Astrofísica de Canarias (IAC), La Laguna, Spain (1993). Visit at Space Telescope Science Intitute, Baltimore (1999). Series of visits at the European Southern Observatory headquarters, Garching, Germany (1997-2005) and at the Institute de Astrophysique de Paris, France (1999-2001). Visit at Steward Obs., Univ. of Arizona, Tucson (2003). Visits and seminars at University California San Diego, invited by prof. A. Wolfe, and at University California Santa Cruz, invited by dr. J. Prochaska (2006). Visit and seminar at the Cornell University, Carl Sagan Institute, Ithaca (2015) invited by dr. L. Kaltenegger. Visiting prof. at Universidad Nacional Mayor de San Marcos, invited by prof. M. Aguilar (Lima, Perú, 2004-2006).

International committees and societies. Member of Società Astronomica Italiana (since 1985), International Astronomical Union (since 1988), Società Italiana di Astrobiologia (since 2008), European Astrobiology Society, EANA (since 2009). Member of the “Academia Nacional de Ciencia y Tecnología – ANCYT” (Peru) as “Academico Correspondiente” (2010-2013). Member of the Directing Board of the Società Italiana di Astrobiologia (2013-2017).

Public outreach. Conferences: Areaperta (CNR, Pisa, 2016), DEEP (Accademia delle Scienze, Torino, 2017), “Reflets dans l’eau” (multidisciplinary meeting, Univ. Torino, 2017). Conferences for high schools (2006-2017). Articles for public outreach (e.g. Coelum 2015). Interviews in radio and TV programs. Conferences abroad: Slovenia (2015-2017); opening of the International Year of Astronomy at Lima, Perù (2009); Italian Institute of Culture, Guatemala City (2008).

Software skills. Development of a software for extraction and correction of IUE echelle spectra. Use of ESO-MIDAS astronomical software for data reduction and analysis. Development of *python* scripts for the creation and management of a database of chemical abundances of Damped Lyman alpha Systems (2008-2014). Development of *fortran* codes and post-processing *python* scripts for climate simulations of terrestrial-type exoplanets (2010-2017).

Languages. Fluent in Italian, English and Spanish.

Biographic data. Born in Venezuela (1954), lives in Italy since 1961 (Rome, Modena, Trieste). Married; two sons and one daughter.