

PERSONAL INFORMATION **Alessandro Orfei**

**POSITION** Senior Technologist at Istituto Nazionale di Astrofisica/Istituto di Radioastronomia

**WORK EXPERIENCE**

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- 2005 – today **In charge of the 32m antenna at Medicina Observatory**  
INAF (National Institute for Astrophysics, Italy)  
Management of the development and maintenance of the 32m radio telescope
- 2007 – 2008 **Member of the Review Committee of the 50m LMT (Large Millimeter Telescope) telescope**  
INAF
- 2003 - 2012 **In charge of the development for the receivers of the new Sardinia Radio Telescope**  
CNR (National Council of Research, Italy) and INAF  
Design and management
- 2002 – 2012 **Participation to 3 European Union funded Research Developments in Radioastronomy**  
Italian Representative for CNR and INAF  
Framework Programmes FP5, FP6, FP7
- 2003 - 2005 **Member of the Project Office for the construction of the new Sardinia Radio Telescope**  
CNR
- 2000 - today **Referee for various reviews**  
Antennas and Propagation Magazine, Publications of the Astronomical Society of the Pacific, Monthly Notices of the Royal Astronomical Society, Journal of Instrumentation, Experimental Astronomy
- 2000 – today **Head of team for the development of microwave receivers for 32m Medicina and 64m Sardinia Radio Telescopes**  
CNR and INAF  
Management and Design of the projects related to the production of the receivers
- 1999 – 2001 **Member of the team for the design of the new Sardinia Radio Telescope**  
CNR
- 1988 - 2005 **In charge of the 32m antenna at Medicina Observatory**  
CNR  
Management of the development and maintenance of the 32m radio telescope
- 1996 - 2003 **Development of a Frequency Agility System for the 32m Medicina Radio Telescope**  
CNR  
Design and management
- 1995 – 2002 **Design and Development of an Active Surface System for the Noto Radio Telescope**  
CNR  
Design and management
- 1992 - 2001 **Italian Station Representative in the European Technical Working Group for VLBI (Very Long Baseline Interferometry) observations**  
CNR

**EDUCATION AND TRAINING**

10/1976-07/1983 Degree in Electronics Engineering  
Alma Mater Studiorum, Bologna University, Department of Engineering

10/1971-06/1976 Aldini Valeriani High School – Certificate Expert in Electronics  
Via Bassanelli 9/11 40129, Bologna (Italy)

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	C1	C1	C1	C2
Replace with name of language certificate. Enter level if known.					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user  
[Common European Framework of Reference for Languages](#)

Communication skills good communication skills gained through my experience as head of development groups both in private company and research in public organizations.

Organisational / managerial skills leadership in development and managing groups (currently responsible for a team of more 10 people). Example: head of team in microwave receiver development; head in charge of managing a radio telescope

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent	Proficient	Basic	Independent	Basic

Levels: Basic user - Independent user - Proficient user  
[Digital competences - Self-assessment grid](#)

- good command of office suite (word processor, spread sheet, presentation software)
- good command of photo editing software

Driving licence B

ADDITIONAL INFORMATION

- Selected Publications**
- P. Bolli, A. Orfei et al.  
"Sardinia Radio Telescope: Technical Commissioning and First Light"  
Journal of Astronomical Instrumentation vol. 4 Number 03n04, December 2015  
DOI: 10.1142/S22511717155000871550008
  - G. Pisano, Ming Wah Ng, R. Nesti, A. Orfei, D. Panella and P. Wilkinson  
"A Novel Broadband Q-band Polariser with Very Flat Phase Response"  
Progress In Electromagnetic Research and Journal of Electromagnetic Waves and Applications Vol. 26 Issue 5-6, 2012 pag. 707-715
  - A. Orfei et al.  
"A Multifield Receiver in the 18-26.5 GHz Band for Radioastronomy"  
IEEE A&P Magazine vol. 52 Issue 4 August 2010 pag. 62-72
  - E. Cenacchi, A. Kraus, A. Orfei, K.-H. Mack  
"Full Stokes polarimetric observations with a single-dish radio telescope"  
A&A 2009 vol. 498 issue 2, p. 591, Section 13
  - A. Orfei, M. Morsiani, G. Zacchiroli, G. Maccaferri, J. Roda, F. Focchi  
"An Active Surface for Large Reflector Antennas"  
IEEE Antennas and Propagation Magazine, 2004 vol. 46, 4 pag 11-19
  - T. Venturi, D. Dallacasa, A. Orfei, M. Bondi, R. Fanti, L. Gregorini, F. Mantovani, C. Stanghellini, C. Trigilio, G. Umara  
"Radio monitoring of a sample of X-ray loud blazars" A&A 379, 755-766 (2001)
  - A. Orfei, M. Morsiani, G. Zacchiroli, G. Maccaferri  
"An Agile Receiver Switching Solution for use with Parabolic Antennas"  
IEEE Antennas and Propagation Magazine, vol. 42, No. 1, February 2000
  - C.B. Cosmovici, S. Montebugnoli, A. Orfei, S. Pogrebenko, S. Cortiglioni  
"The puzzling detection of the 22 GHz water emission line in comet Hyakutake at perihelion"  
Planetary and Space Science vol.46, No 4 pp. 467-470, 1998
  - R. Ambrosini, G. Grueff, M. Morsiani, G. Maccaferri, P. Zacchiroli, A. Orfei  
"Analysis of the alidade temperature behaviour of the Medicina VLBI radiotelescope"  
Astrophysics and Space Science 239, pp. 247-258, 1996
  - C.B. Cosmovici, S. Montebugnoli, A. Orfei, S. Pogrebenko, P. Colom  
"First evidence of water maser emission induced by a catastrophic impact"  
Planetary and Space Science, vol. 44, No. 8, pp. 735-739, 1996
  - Venturi, Grueff, Trigilio, Tomassetti, Bortolotti, Cosmovici, Maccaferri A., Maccaferri G.,  
Montebugnoli, A. Orfei, Padrielli, M. Roma, G. Tuccari, G. Umara  
"Multiwavelength radio observations of the Jupiter-SL 9 comet encounter"  
Astronomy & Astrophysics 316, 243-247 (1996)
  - G. Cancellieri, A. Orfei  
"Asymptotic effective cutoff condition in single mode fibers"  
Journal of Lightwave Technology, vol. LT-5, n. 2, February 1987
  - G. Cancellieri, A. Orfei  
"Discussion on the effective cutoff wavelength of the LP11 mode in single mode optical fibres",  
Optics Communications vol. 55, n.6 October 1985
  - A. Orfei
- Selected Conferences**
- "Report on VLBI status at Medicina 32m and about a possible Antenna Upgrade up to 100 GHz" 6th International VLBI Technology Workshop - Bologna, October 9-11, 2017
  - A. Orfei  
"Multi-frequency observations using multifield systems"  
Radionet ERATec Workshop, 'Multi-frequency mm-wave radio telescopes & other software controlled operations', Firenze 5-7 October 2015 (Invited talk)

- A. Orfei  
"Using Multifrequency Systems for Multifrequency mm-VLBI Observations from 18 to 100 GHz and above"  
EATING VLBI Congress, Bologna 13-14 October 2014
- A. Orfei  
"Updates on SRT, the Sardinia Radio Telescope" invited talk at  
8th Radionet Engineering Forum, 24-25th November 2008 Yebes observatory (Spain)
- A. Cremonini, S. Mariotti, V. Natale, R. Nesti, A. Orfei, G. Tofani, D. Kettle, N. Roddis, R. Witvers, J.G. Bij de Vaate  
"State of the art MMIC InP LNA realizations and applications in FARADAY array receivers"  
13th Mediterranean Electrotechnical Conference (Melecon) 16-19 May 2006, Malaga (Spagna) pag. 561-564
- A. Orfei et al.  
"SRT Receiving System Architecture and the Receivers for the Commissioning Phase"  
Mem. SAIT Suppl. Series vol. 10 2006 pag. 34-39
- A. Orfei, et al.  
"The panels for primary and secondary mirror reflectors and the active surface system for the new Sardinia RadRadio Telescope" Mem. SAIT Suppl. Series vol. 10 2006 pag. 126-130
- A. Orfei  
"Receiving Systems for the Antennas Operated by the Institute of Radioastronomy in Italy"  
RadioNet Engineering Forum, "NewTrends InReceiverDevelopments", Medicina observatory (Bologna), 30 Maggio 2005.
- A. Orfei, M. Morsiani, G. Zacchiroli, G. Maccaferri, J. Roda, F. Fiocchi  
"Active surface system for the new Sardinia Radiotelescope"  
Proceedings on SPIE Conference Astronomical Structures and Mechanisms, vol. 5495, 116
- A. Orfei, Zacchiroli G., Roda J., Maccaferri G., Morsiani M., Fiocchi F.  
"New Solution on Large Reflector Antennas for Radioastronomical Applications in the Microwave and Millimeter Range"  
ICEAA (International Conference on Electromagnetics in Advanced Applications) 8-12 Sept. 2003, Torino (Italy)
- A. Orfei, M. Roma  
"The Polarimetric Observation Facility at the Medicina 32m Parabolic Antenna"  
Proceedings of the Astrophysical Polarized Backgrounds International Workshop  
October 2-9, 2001 Bologna (Italy) p. 169-174

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## ANNEXES