

PERSONAL INFORMATION

Alessandro Orfei



Sex | Date of birth | Nationality

POSITION

Senior Technologist at Istituto Nazionale di Astrofisica/Istituto di Radioastronomia

WORK EXPERIENCE

- | | |
|--------------|---|
| 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 | Partecipation 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 Multifed 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. Triglio, G. Umana
"Radio monitoring of a sample of X- and γ -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, Triglio, Tomassetti, Bortolotti, Cosmovici, Maccaferri A., Maccaferri G., Montebugnoli, A. Orfei, Padrielli, M. Roma, G. Tuccari, G. Umana
"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

Selected Conferences

- A. Orfei
"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 multifed systems"
Radionet ERATec Workshop, 'Multi-frequency mm-wave radio telescopes & other software controlled operations', Firenze 5-7 October 2015 (Invited talk)

- A. Orfei
"Using Multifed 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 (Spain) 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 Radi Radio 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, "New Trends In Receiver Developments", Medicina observatory (Bologna), 30 Maggio 2005.
- A. Orfei, M. Morsiani, G. Zacchiroli, G. Maccaferri, J. Roda, F. Focchi
"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., Focchi 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

ANNEXES