

CURRICULUM VITAE OF ROBERTO SEU (suitable for the publication)

Roberto Seu has got the doctoral degree in Electronics Engineering in March 1985 at the "Universita' degli Studi "La Sapienza" of Rome", and the PhD at the same University in October 1990.

Since 1988 through 1992 he has been assistant lecturer of the courses Radar Systems and Radar Theory and Technique

Since 1992 he is assistant professor and he is lecturer of the course of "Radar systems for space applications" and "Systems for air traffic control".

The scientific expertise of R. Seu is mainly based on the design of advanced radar systems for planetary observation and on advanced radar signal processing.

Since the doctoral degree he has been always working on radar systems and mainly on radars for planetary observations. He has been working on the feasibility studies of radar payloads of the ESA missions Rosetta/CNSR (Comet Nucleus Sample Return), MORO (Moon ORbiting Observatory) and INTERMARSNET.

Roberto Seu is, since 1993, member of the Cassini Radar Science Team, co-investigator of the experiment CONSERT, payload of the ESA mission Rosetta and of the experiment MARSIS, radar sounder on board the ESA mission Mars Express.

Since 2001 he is Team Leader of the experiment SHARAD, a radar sounder payload of the NASA mission Mars Reconnaissance Orbiter.

Since 2018 he is Co-I of the radar sounder RIME payload of the ESA mission JUICE

Roberto Seu is referee of Planetary and Space Science, of the IEEE Transactions on Geoscience and Remote Sensing, IEEE Transactions on Aerospace and Electronic System and of the scientific journal Icarus and he has been member of the scientific committee of the Radar Conference 2008, held in Rome on May 2008. He is currently member of the scientific committee of the Radar Conference 2020

Roberto Seu has received the "Certificate of appreciation" from the JPL/MRO Project and the "AWARD" from NASA Headquarters for the results achieved by the SHARAD Team in the design and development phase of SHARAD. Last July 2008 he has received from the IEEE Geoscience and Remote Sensing Society the "2008 Interactive Session Prize Paper Award" for the paper "SHARAD design and operation" presented at the IGARSS 2007 Conference.

LIST OF MOST SIGNIFICANT RECENT CO-AUTHORED PAPERS

1. MASTROGIUSEPPE, MARCO, A. G. Hayes, J. I. Lunine, R. D. Lorenz, R. Seu, A. Le Gall, C. Notarnicola, K. L. Mitchell, M. Malaska, S. P. D. Birch, POGGIALI, VALERIO (2018). Bathymetry and composition of Titan's Ontario lacus derived from Monte Carlo-based waveform inversion of Cassini radar altimetry data. ICARUS, vol. 300, p. 203-209, ISSN: 0019-1035, doi: 10.1016/j.icarus.2017.09.009.
2. M. Mastrogiuseppe, V. Poggiali, A. G. Hayes, J. I. Lunine, R. Seu, G. Di Achille, R. D. Lorenz (2018). Cassini radar observation of Punga Mare and environs: bathymetry and composition. EARTH AND PLANETARY SCIENCE LETTERS, vol. 496, p. 89-95, ISSN: 0012-821X, doi: 10.1016/j.epsl.2018.05.033.
3. R. Orosei, S. E. Lauro, E. Pettinelli, A. Cicchetti, M. Coradini, B. Cosciotti, F. Di Paolo, E. Flamini, E. Mattei, M. Pajola, F. Soldovieri, M. Cartacci, F. Cassenti, A. Frigeri, S. Giuppi,

- R. Martufi, A. Masdea, G. Mitri, C. Nenna, R. Noschese, M. Restano, R. Seu (2018). Radar evidence of subglacial liquid water on Mars. *SCIENCE*, vol. 361, p. 490-493, ISSN: 1095-9203, doi: 10.1126/science.aar7268.
4. Elvira Musicò, Claudio Cesaroni, Luca Spogli, John Peter Merryman Boncori, Giorgiana De Franceschi, Roberto Seu (2018). The total electron content from InSAR and GNSS: a midlatitude study. *IEEE JOURNAL OF SELECTED TOPICS IN APPLIED EARTH OBSERVATIONS AND REMOTE SENSING*, vol. 11, p. 1725-1733, ISSN: 2151-1535, doi: 10.1109/JSTARS.2018.2812305.
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 6. RESTANO, MARCO, SEU, Roberto, PICARDI, Giovanni (2016). A phase-gradient-autofocus algorithm for the recovery of MARSIS subsurface data. *IEEE GEOSCIENCE AND REMOTE SENSING LETTERS*, vol. 13, p. 806-810, ISSN: 1545-598X, doi: 10.1109/LGRS.2016.2546315. Number of citations 3, IF 2.892
 7. M. Mastrogiuseppe, A.G. Hayes, V. Poggiali, J.I. Lunine, R.D. Lorenz, R. Seu, A. Le Gall, C. Notarnicola, K.L. Mitchell, M. Malaska, S.P.D. Birch, Bathymetry and composition of Titan's Ontario Lacus derived from Monte Carlo-based waveform inversion of Cassini RADAR altimetry data, *ICARUS* 300 (2018), 203-209, DOI 10.1016/j.icarus.2017.09.009
 8. Marco Mastrogiuseppe, A. Hayes, V. Poggiali, R. Seu, Jonathan I. Lunine, and J. D. Hofgartner, Radar Sounding Using the Cassini Altimeter: Waveform Modeling and Monte Carlo Approach for Data Inversion of Observations of Titan's Seas, *IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING*, VOL. 54, NO. 10, OCTOBER 2016
 9. V. Poggiali¹, M. Mastrogiuseppe², A. G. Hayes², R. Seu¹, S. P. D. Birch², R. Lorenz⁴, C. Grima³, and J. D. Hofgartner², Liquid-filled canyons on Titan, *Geophys. Res. Lett.*, 43, 7887–7894, doi:10.1002/2016GL069679.
 10. Restano, M., J. J. Plaut, B. A. Campbell, Y. Gim, D. Nunes, F. Bernardini, A. Egan, R. Seu, and R. J. Phillips (2015), Effects of the passage of Comet C/2013 A1 (Siding Spring) observed by the Shallow Radar (SHARAD) on Mars Reconnaissance Orbiter, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL064150.
 11. R. Orosei^a, R.L. Jordan^b, D.D. Morgan^c, M. Cartacci^d, A. Cicchetti^d, F. Duru^c, D.A. Gurnett^c, E. Heggy^b, D.L. Kirchner^c, R. Noschese^d, W. Kofman^{e, f}, A. Masdea^g, J.J. Plaut^b, R. Seu^g, T.R. Watters^h, G. Picardi^g (2014). Mars Advanced Radar for Subsurface and Ionospheric Sounding (MARSIS) after nine years of operation: A summary. *Planetary and Space Science*, 112(2015)98–114, DOI: 10.1016/j.pss.2014.07.010
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 13. Marco Mastrogiuseppe¹, Valerio Poggiali¹, Alexander Hayes², Ralph Lorenz³, Jonathan Lunine², Giovanni Picardi¹, Roberto Seu¹, Enrico Flamini⁴, Giuseppe Mitri⁵, Claudia Notarnicola⁶, Philippe Paillou⁷ and Howard Zebker, (2014). The bathymetry of a Titan sea. *Geophys. Res. Lett.*, 41, doi:10.1002/2013GL058618.
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18. SEU R. et al. (2010). Correlations between VIMS and RADAR data over the surface of Titan: Implications for Titan's surface properties, *Icarus* 208 (2010) 366–384
19. R. Seu et al. "Dielectric properties of lava flows west of Ascraeus Mons, Mars", *GEOPHYSICAL RESEARCH LETTERS*, VOL. 36, LXXXXX, doi:10.1029/2009GL041234, 2009
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