

## PUBBLICAZIONI SCIENTIFICHE DI STEFANIA BONAFONI

**Articoli su riviste internazionali: 67**

**Articoli su riviste nazionali: 7**

**Libri: 1, Capitoli di libro: 3**

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### Riviste internazionali (peer-reviewed)

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- [J.1] P. Basili, S. Bonafoni, P. Ciotti, F.S. Marzano, G. d'Auria and N. Pierdicca, "Retrieving atmospheric temperature profiles from microwave radiometry using *a priori* information on atmospheric spatial-temporal evolution", IEEE Trans. on Geosci. and Remote Sensing, vol. 39, no. 9, pp. 1896-1905, September 2001, doi: 10.1109/36.951080, ISSN: 0196-2892
- [J.2] P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti, E. Fionda and R. Ambrosini, "Atmospheric water vapour retrieval by means of both a GPS network and a microwave radiometer during an experimental campaign at Cagliari (Italy) in 1999", IEEE Trans. on Geosci. and Remote Sensing, vol. 39, no. 11, pp. 2436-2443, November 2001, doi: 10.1109/36.964980, ISSN: 0196-2892
- [J.3] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, N. Pierdicca, "Mapping the atmospheric water vapor by integrating microwave radiometer and GPS measurements", IEEE Trans. on Geosci. and Remote Sensing, vol. 42, no. 8, pp. 1657-1665, August 2004, doi: 10.1109/TGRS.2004.830943, ISSN: 0196-2892
- [J.4] A. Memmo, E. Fionda, T. Paolucci, D. Cimini, R. Ferretti, S. Bonafoni and P. Ciotti, "Comparison of MM5 Integrated Water Vapor with Microwave Radiometer, GPS, and Radiosonde Measurements", IEEE Trans. on Geosci. and Remote Sensing, vol. 43, no. 5, pp. 1050-1058, May 2005, doi: 10.1109/TGRS.2004.841488, ISSN: 0196-2892
- [J.5] F. Alimenti, S. Bonafoni, S. Leone, G. Tasselli, P. Basili, L. Roselli, K. Solbach, "A low-cost microwave radiometer for the detection of fire in forest environments", IEEE Trans. on Geosci. and Remote Sensing, vol. 46, n. 9, pp.2632-2643, Sept. 2008, doi: 10.1109/TGRS.2008.921395, ISSN: 0196-2892
- [J.6] S. Bonafoni, F. Pelliccia, R. Anniballe, "Comparison of different neural network approaches for the tropospheric profiling over the inter-tropical lands using GPS radio occultation data", Algorithms, vol. 2, pp. 31-45, 2009, doi:10.3390/a2010031, ISSN: 1999-4893
- [J.7] V. Mattioli, P. Basili, S. Bonafoni, P. Ciotti, E.R. Westwater, "Analysis and Improvements of cloud models for propagation studies", Radio Science, vol. 44, RS2005, 2009, doi:10.1029/2008RS003876, ISSN: 0048-6604
- [J.8] A. Kalauzi, M. Cukic, H.M. Vega, S. Bonafoni, R. Biondi, "Comparison of fractal dimension oscillations and trends of rainfall data from Pastaza Province, Ecuador and Veneto, Italy", Atmospheric Research, vol. 93, n. 4, 673-679, 2009, doi:10.1016/j.atmosres.2009.02.007, ISSN: 0169-8095
- [J.9] E. Bocci, S. Bonafoni, P. Basili, R. Biondi, O. Arinò, "Analysis of aerosol optical depth retrieved by MODIS and MERIS and comparison with photometer data", Italian Journal of Remote Sensing, 41, n. 1, pp. 5-10, 2009, ISSN: 1129-8596
- [J.10] A. Serpolla, S. Bonafoni, R. Biondi, O. Arinò, P. Basili, "Validation of near infrared satellite based algorithms to retrieve atmospheric water vapour content over land", Italian Journal of Remote Sensing, 41, n. 1, pp. 37-44, 2009, ISSN: 1129-8596

- [J.11] F. Pelliccia, S. Bonafoni, P. Basili, R. Anniballe, N. Pierdicca, P. Ciotti, "Estimation of tropospheric profiles using COSMIC GPS radio occultation data with neural networks", *Italian Journal of Remote Sensing*, 41, n. 3, pp. 23-38, 2009, ISSN: 1129-8596
- [J.12] G. Tasselli, F. Alimenti, S. Bonafoni, P. Basili, L. Roselli, "Fire detection by microwave radiometric sensors: modelling a scenario in the presence of obstacles", *IEEE Trans. on Geosci. and Remote Sensing*, vol. 48, n. 1, pp. 314-324, January 2010, doi: 10.1109/TGRS.2009.2024305, ISSN: 0196-2892
- [J.13] R. Fabrizi, S. Bonafoni, R. Biondi, "Satellite and ground-based sensors for the Urban Heat Island analysis in the city of Rome", *Remote Sensing*, vol. 2, n. 5, pp. 1400-1415, 2010, doi:10.3390/rs2051400, ISSN: 2072-4292
- [J.14] F. Pelliccia, S. Bonafoni, P. Basili, P. Ciotti, N. Pierdicca, "Atmospheric profiling in the inter-tropical ocean area based on neural network approach using GPS radio occultations", *The Open Atmospheric Science Journal*, vol. 4, pp. 202-209, 2010, doi: 10.2174/1874282301004010202, ISSN: 1874-2823
- [J.15] S. Bonafoni, F. Alimenti, G. Angelucci, G. Tasselli, "Microwave radiometry imaging for forest fire detection: a simulation study", *Journal of Progress in Electromagnetics Research*, vol. 112, pp. 77-92, 2011, ISSN: 1559-8985
- [J.16] S. Bonafoni, V. Mattioli, P. Basili, P. Ciotti, N. Pierdicca, "Satellite-based retrieval of Precipitable Water Vapor over land by using a neural-network approach", *IEEE Trans. on Geosci. and Remote Sensing*, vol. 49, n. 9, pp. 3236-3248, September 2011, doi: 10.1109/TGRS.2011.2160184, ISSN: 0196-2892
- [J.17] F. Pelliccia, F. Pacifici, S. Bonafoni, P. Basili, P. Ciotti, N. Pierdicca, W.J. Emery, "Neural Networks for Arctic atmosphere sounding from Radio Occultation data", *IEEE Trans. on Geosci. and Remote Sensing*, vol. 49, n. 12, pp. 4846-4855, December 2011, doi: 10.1109/TGRS.2011.2153859, ISSN: 0196-2892
- [J.18] D. Cimini, N. Pierdicca, E. Pichelli, R. Ferretti, V. Mattioli, S. Bonafoni, M. Montopoli, D. Peressin, "On the accuracy of integrated water vapor estimates and the potential for mitigating electromagnetic path delay error in InSAR", *Atmospheric Measurement Techniques*, vol. 5, pp.1015-1030, 2012, doi:10.5194/amt-5-1015-2012, ISSN: 1867-1381
- [J.19] M. Pichierri, S. Bonafoni, R. Biondi, "Satellite air temperature estimation for monitoring the canopy layer heat island of Milan", *Remote Sensing of Environment*, vol. 127, pp. 130-138, 2012, doi: 10.1016/j.rse.2012.08.025, ISSN 0034-4257
- [J.20] S. Bonafoni, A. Mazzoni, N. Cimini, M. Montopoli, N. Pierdicca, P. Basili, P. Ciotti, G. Carlesimo, "Assessment of water vapor retrievals from a GPS receiver network", *GPS Solutions*, vol. 17, n. 4, pp. 475-484, 2013, doi: 10.1007/s10291-012-0293-5, ISSN 1080-5370
- [J.21] P. Basili, S. Bonafoni, P. Ciotti, N. Pierdicca, "Modeling and sensing the vertical structure of the atmospheric path delay by microwave radiometry to correct SAR Interferograms", *IEEE Trans. on Geosci. and Remote Sensing*, vol. 52, n. 2, pp. 1324-1335, February 2014, doi:10.1109/TGRS.2013.2250292, ISSN: 0196-2892
- [J.22] R. Anniballe, S. Bonafoni, M. Pichierri, "Spatial and temporal trends of the surface and air heat island over Milan using Modis data", *Remote Sensing of Environment*, vol. 150, pp. 163-171, 2014, doi: 10.1016/j.rse.2014.05.005, ISSN: 0034-4257
- [J.23] G. Baldinelli, S. Bonafoni, R. Anniballe, A. Presciutti, B. Gioli, V. Magliulo, "Spaceborne detection of roof and impervious surface albedo: potentialities and comparison with airborne thermography measurements", *Solar Energy*, vol. 113, pp. 281-294, 2015, doi: 10.1016/j.solener.2015.01.011, ISSN: 0038-092X
- [J.24] R. Anniballe, S. Bonafoni, "A stable Gaussian procedure for the parameterization of remote sensed thermal images", *Algorithms*, vol. 8, n. 2, pp. 82-91, 2015, doi: 10.3390/a8020082, ISSN: 1999-4893

- [J.25] S. Bonafoni, "The spectral index utility for summer urban heating analysis", *Journal of Applied Remote Sensing*, vol. 9, n. 1, 096030(1-16), 2015, doi:10.1117/1.JRS.9.0960302015, ISSN: 1931-3195
- [J.26] S. Bonafoni, F. Alimenti, "On the possibility of sensing an early stage fire in moving vehicles by microwave radiometry", *Journal of Electromagnetic Waves and Applications*, 2015, vol. 29, n. 14, pp. 1875-1886, 2015, doi: 10.1080/09205071.2015.1064328, ISSN: 1569-3937
- [J.27] S. Bonafoni, R Biondi, "The usefulness of the Global Navigation Satellite Systems (GNSS) in the analysis of precipitation events", *Atmospheric Research*, vol. 167, 2016, pp. 15-23, doi:10.1016/j.atmosres.2015.07.011, ISSN: 0169-8095
- [J.28] S. Bonafoni, "Downscaling of Landsat and MODIS Land Surface Temperature over the heterogeneous urban area of Milan", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol. 9, n. 5, 2016, pp. 2019-2027, doi: 10.1109/JSTARS.2016.2514367, ISSN: 1939-1404
- [J.29] F. Alimenti, L. Roselli, S. Bonafoni, "Microwave Radiometers for Fire Detection in Trains: Theory and Feasibility Study", *Sensors*, vol.16, n. 6, 2016, 906, doi:10.3390/s16060906, ISSN: 1424-8220
- [J.30] S. Bonafoni, R. Anniballe, B. Gioli, P. Toscano, "Downscaling Landsat Land Surface Temperature over the urban area of Florence", *European Journal of Remote Sensing*, vol. 49, 2016, pp. 553-569, doi: 10.5721/EuJRS20164929, ISSN: 1129-8569
- [J.31] S. Bonafoni, G. Tosi, "Downscaling of Land Surface Temperature using airborne High Resolution data: a case study on Aprilia, Italy", *IEEE Geoscience and Remote Sensing Letters*, vol 14, n.1, 2017, pp. 107-111, DOI: 10.1109/LGRS.2016.2630798, ISSN: 1558-0571
- [J.32] S. Bonafoni, G. Baldinelli, P. Verducci, "Sustainable strategies for smart cities: analysis of the town development effect on surface urban heat island through remote sensing methodologies", *Sustainable Cities and Society*, vol. 29, 2017, pp. 211-218, doi: 10.1016/j.scs.2016.11.005, ISSN: 2210-6707
- [J.33] F. Alimenti, S. Bonafoni, L. Roselli, "A Novel Sensor Based on a Single-Pixel Microwave Radiometer for Warm Object Counting: Concept Validation and IoT Perspectives", *Sensors*, vol.17, n. 6, 2017, 1338, doi:10.3390/s17061388, ISSN: 1424-8220
- [J.34] S. Bonafoni, G. Baldinelli, P. Verducci, A. Presciutti, "Remote sensing techniques for urban heating analysis: a case study of district regeneration", *Sustainability*, vol, 9, 1308, 2017, doi: 10.3390/su9081308, ISSN: 2071-1050
- [J.35] G. Baldinelli, S. Bonafoni, A. Rotili, "Albedo retrieval from multispectral Landsat 8 observation in urban environment: algorithm validation by in situ measurements", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, vol. 10, no. 10, 2017, pp. 4504-4511, doi: 10.1109/JSTARS.2017.2721549, ISSN: 1939-1404
- [J.36] F. Alimenti, V. Palazzi, C. Mariotti, M. Virili, G. Orecchini, S. Bonafoni, L. Roselli, P. Mezzanotte, "A 24-GHz Front-End Integrated on a Multilayer Cellulose-Based Substrate for Doppler Radar Sensors", *Sensors*, vol.17, n. 9, 2090, 2017, doi:10.3390/s17092090, ISSN: 1424-8220
- [J.37] S. Bonafoni, V. Mattioli, "Tropospheric dry delay for microwaves using a model based on surface measurements on a global scale", *IET Microwaves, Antennas & Propagation*, vol. 12, n.1, 2018, pp.9-14, doi:10.1049/iet-map.2016.1148, ISSN 1751-8725
- [J.38] D. Zhou, S. Bonafoni, L. Zhang, R. Wang, "Remote sensing of the urban heat island effect in a highly populated urban agglomeration area in East China", *Science of The Total Environment*, vol. 628-629, pp. 415-429, 2018, doi.org/10.1016/j.scitotenv.2018.02.074, ISSN: 0048-9697
- [J.39] C. Keeratikasikorn, S. Bonafoni "Urban Heat Island Analysis over the Land Use Zoning Plan of Bangkok by Means of Landsat 8 Imagery" *Remote Sensing*, vol. 10 n. 3, 440, 2018, doi:10.3390/rs10030440, ISSN: 2072-4292

- [J.40] C. Keeratikasikorn, S. Bonafoni "Satellite Images and Gaussian Parameterization for an Extensive Analysis of Urban Heat Islands in Thailand", *Remote Sensing*, vol. 10 n. 5, 665, 2018, doi: 10.3390/rs10050665, ISSN: 2072-4292
- [J.41] S. Bonafoni, F Alimenti, L. Roselli, "An Efficient Gain Estimation in the Calibration of Noise-Adding Total Power Radiometers for Radiometric Resolution Improvement" *IEEE Transactions on Geoscience and Remote Sensing*, vol. 56, n.9, pp.5289-5298, 2018, doi: 10.1109/TGRS.2018.2812904, ISSN: 0196-2892
- [J.42] S. Bonafoni, C. Keeratikasikorn, "Land Surface Temperature and Urban Density: Multiyear Modeling and Relationship Analysis Using MODIS and Landsat Data", *Remote Sensing*, vol. 10, n. 9, 1471, 2018, doi: 10.3390/rs10091471, ISSN: 2072-4292
- [J.43] D. Zhou, J. Xiao, S. Bonafoni, C Berger, K. Deilami, Y. Zhou, S. Frolking, R. Yao, Z. Qiao, J.A. Sobrino "Satellite Remote Sensing of Surface Urban Heat Islands: Progress, Challenges, and Perspectives", *Remote Sensing*, vol. 11 n. 1, 48, 2019, doi: 10.3390/rs11010048, ISSN: 2072-4292
- [J.44] F. Alimenti; Mezzanotte, P.; Roselli, L.; Palazzi, V.; Bonafoni, S.; Vincenti Gatti, R.; Rugini, L.; Baruffa, G.; Frescura, F.; Banelli, P.; Bernardi, F.; Gemma, F.; Nannetti, G.; Gervasoni, P.; Glionna, P.; Pagana, E.; Gotti, G.; Petrini, P.; Coromina, F.; Pergolesi, F.; Fragiaco, M.; Cuttin, A.; De Fazio, E.; Dogo, F.; Gregorio, "K/Ka-Band Very High Data-Rate Receivers: A Viable Solution for Future Moon Exploration Missions", *Electronics*, vol. 8, 349, 2019, doi: 10.3390/electronics8030349, ISSN: 2079-9292
- [J.45] M. Gholamnia, R. Khandan, S. Bonafoni, A. Sadeghi, "Spatiotemporal Analysis of MODIS NDVI in the Semi-Arid Region of Kurdistan (Iran)". *Remote Sensing*, vol. 11, 1723, 2019, doi: 10.3390/rs11141723, ISSN: 2072-4292
- [J.46] S. Bonafoni, R. Biondi, H. Brenot, R. Anthes, "Radio occultation and ground-based GNSS products for observing, understanding and predicting extreme events: A review", *Atmospheric Research*, vol. 230, 104624, 2019, doi: 10.1016/j.atmosres.2019.104624, ISSN: 0169-8095
- [J.47] P. Mohammad, A. Goswami, S Bonafoni, "The Impact of the Land Cover Dynamics on Surface Urban Heat Island Variations in Semi-Arid Cities: A Case Study in Ahmedabad City, India, Using Multi-Sensor/Source Data", *Sensors*, vol. 19, 3701, 2019, doi: 10.3390/s19173701, ISSN: 1424-8220
- [J.48] V. Palazzi, S. Bonafoni, F. Alimenti, P. Mezzanotte, L. Roselli, "Feeding the World with Microwaves: How Remote and Wireless Sensing Can Help Precision Agriculture", *IEEE Microwave Magazine*, pp. 72-86, December 2019, doi: 10.1109/MMM.2019.2941618, ISSN: 1527-3342
- [J.49] S. Bonafoni, "Comments on the published article: 'Capability of Sentinel-2 data for estimating maximum evapotranspiration and irrigation requirements for tomato crop in Central Italy' by S. Vanino et al., *Remote Sensing of Environment*, 215(2018), 452-470", *Remote Sensing of Environment*, vol. 237, 111523, 2020, doi: 10.1016/j.rse.2019.111523, ISSN: 0034-4257
- [J.50] A. Sekertekin, S. Bonafoni, "Land Surface Temperature retrieval from Landsat 5, 7, and 8 over rural areas: assessment of different retrieval algorithms and emissivity models and toolbox implementation", *Remote Sensing*, vol. 12, 294, 2020, doi: 10.3390/rs12020294, ISSN: 2072-4292
- [J.51] F. Alimenti, S. Bonafoni, E. Gallo, V. Palazzi, R. Vincenti Gatti, P. Mezzanotte, L. Roselli, D. Zito, S. Barbetta, C. Corradini, D. Termini, T. Moramarco, "Non-Contact Measurement of River Surface Velocity and Discharge Estimation by a Low-Cost Doppler Radar Sensor" *IEEE Transactions on Geoscience and Remote Sensing*, vol.58, n.7, pp. 5195-5206, July 2020, doi 10.1109/TGRS.2020.2974185, ISSN: 0196-2892
- [J.52] S. Bonafoni, A. Sekertekin, "Albedo retrieval from Sentinel-2 by new narrow-to-broadband conversion coefficients", *IEEE Geoscience and Remote Sensing Letters*, vol.17, n.9, pp. 1618 - 1622, 2020, doi: 10.1109/LGRS.2020.2967085, ISSN: 1558-0571

- [J.53] A. Sekertekin, S. Bonafoni, "Sensitivity Analysis and Validation of Daytime and Nighttime Land Surface Temperature Retrievals from Landsat 8 Using Different Algorithms and Emissivity Models", *Remote Sensing*, vol.12, 2776, 2020, doi: 10.3390/rs12172776, ISSN: 2072-4292
- [J.54] A. Choudhury, A.C. Yadav, S Bonafoni, "A Response of Snow Cover to the Climate in the Northwest Himalaya (NWH) Using Satellite Products", *Remote Sensing*, vol.13, 655, 2021, doi: 10.3390/rs13040655, ISSN: 2072-4292
- [J.55] P. Sajadi, Y.-F. Sang, M. Gholamnia, S. Bonafoni, L. Brocca, B. Pradhan, A. Singh, "Performance Evaluation of Long NDVI Timeseries from AVHRR, MODIS and Landsat Sensors over Landslide-Prone Locations in Qinghai-Tibetan Plateau", *Remote Sensing*, vol.13, 3172, 2021, doi: 10.3390/rs13163172, ISSN: 2072-4292
- [J.56] R. Pu, S. Bonafoni, "Reducing Scaling Effect on Downscaled Land Surface Temperature Maps in Heterogenous Urban Environments", *Remote Sensing*, vol.13, 5044, 2021, doi: 10.3390/rs13245044, ISSN: 2072-4292
- [J.57] P. Sajadi, Y-F. Sang, M. Gholamnia, S. Bonafoni, S. Mukherjee, "Evaluation of the landslide susceptibility and its spatial difference in the whole Qinghai-Tibetan Plateau region by five learning algorithms", *Geoscience Letters* 9, 9, 2022, doi: 10.1186/s40562-022-00218-x, ISSN: 2196-4092
- [J.58] R. Khandan, J-P Wigneron, S. Bonafoni, A. Pour Biazar, M Gholamnia, "Assimilation of Satellite Derived Soil Moisture and Brightness Temperature in Land Surface Models: a review", *Remote Sensing*, vol.14, 770, 2022, doi: 10.3390/rs14030770, ISSN: 2072-4292
- [J.59] R. Pu, S. Bonafoni, "Correcting Scaling Effect in Downscaling Surface Temperature at High Resolutions with a Multiple Regional Correction Approach", *IEEE Geoscience and Remote Sensing Letters*, vol.19, pp. 1-5, 2022, doi: 10.1109/LGRS.2022.3186467, ISSN: 1558-0571
- [J.60] F. Rossi, M. Filipponi, B. Castellani, S. Bonafoni, C. Ghenai, "A Novel Measurement-Based Method for Assessing Global Warming Mitigation via High-Albedo Solutions", *Energies*, vol. 15, 5695, 2022, doi: 10.3390/en15155695, ISSN: 1996-1073
- [J.61] P. Filippucci, L. Brocca, S. Bonafoni, C. Saltalippi, W. Wagner, A. Tarpanelli, "Sentinel-2 high-resolution data for river discharge monitoring", *Remote Sensing of Environment*, vol. 221, 113255, 2022, doi: 10.1016/j.rse.2022.113255, ISSN: 0034-4257
- [J.62] P. Sajadi, M. Gholamnia, S. Bonafoni, F. Pilla, "Spectral-based Regression Model for Destriping of Abnormal Pixel Values in PRISMA Hyperspectral Image", *European Journal of Remote Sensing*, vol. 55, n.1, pp. 622-643, 2022, doi: 10.1080/22797254.2022.2141659, ISSN: 2279-7254.
- [J.63] M.R. Ceccarini, V. Palazzi, R. Salvati, I. Chiesa, C. De Maria, S. Bonafoni, P. Mezzanotte, M. Codini, L. Pacini, F. Errante, P. Rovero, A. Morabito, T. Beccari, L. Roselli, L. Valentini, "Biomaterial Inks from Peptide-Functionalized Silk Fibers for 3D Printing of Futuristic Wound-Healing and Sensing Materials", *International Journal of Molecular Sciences*, 2023, 24, 947, doi: 10.3390/ijms24020947
- [J.64] R. Pu, S. Bonafoni "Thermal Infrared Remote Sensing Data Downscaling Investigations: An Overview on Current Status and Perspectives", *Remote Sensing Applications: Society and Environment*, 2023, 29, 100921, doi: 10.1016/j.rsase.2023.100921, ISSN 2352-9385.
- [J.65] L. Balocchi, V. Palazzi, S. Bonafoni, F. Alimenti, P. Mezzanotte and L. Roselli, "Compact Green Harmonic Transponders for Parcel Tracking", *IEEE Journal of Radio Frequency Identification*, 2023, doi: 10.1109/JRFID.2023.3262022.
- [J.66] P.A. Palanisamy, K. Jain, S. Bonafoni "Machine Learning Classifier Evaluation for Different Input Combinations: A Case Study with Landsat 9 and Sentinel-2 Data", *Remote Sensing*, 2023, 15, 3241. doi: 10.3390/rs15133241
- [J.67] F. Rossi, B. Castellani, A. Pazzaglia, A. Di Giuseppe, S. Bonafoni, M. Filipponi, A. Presciutti, F. Cotana,

"Application of the novel satellite calibrated method "Radiative Forcing Meter" on a high albedo test facility for CO<sub>2</sub> compensation", *Solar Energy*, 263, 2023, doi: 10.1016/j.solener.2023.111934, ISSN: 0038-092X

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### **Libri/Capitoli di libro**

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- [B.1] F. Pelliccia, S. Bonafoni, "Atmospheric profiling by GPS Radio Occultation", Lambert Academic Publishing, 2011 (published 22/02/2011), 80 pages, ISBN: 978-3-8443-0871-6.
- [B.2] G. d'Auria, N. Pierdicca, P. Basili, S. Bonafoni, P. Ciotti and F.S. Marzano, "SSM/I data analysis for retrieving cloud properties: a comparison with ground-based measurements", *Microwave Radiometry and Remote Sensing of the Earth's Surface and Atmosphere*, P. Pampaloni/S Paloscia Ed., VSP Science Press, pp. 387-396, Utrecht, 2000, ISBN: 90-6764-318-1.
- [B.3] R. Notarpietro, E. Cucca, S. Bonafoni, "GNSS signals: a powerful source for Atmosphere and Earth's Surface Monitoring", in *Remote Sensing of Planet Earth*, Ch.8, pp 171-200, Ed. Yann Chemin, InTech, January 2012, ISBN 978-953-307-919-6.
- [B.4] L. Roselli, P. Mezzanotte, V. Palazzi, S. Bonafoni, G. Orecchini, F. Alimenti, "WPT-Enabling Distributed Sensing", in *Recent Wireless Power Transfer Technologies via Radio Waves*, Ch. 7, pp.173-208, Editor: Naoki Shinohara, River Publishers, 2018, ISBN: 978-87-93609-24-2

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### **Riviste nazionali**

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- [N.1] P. Basili, S. Bonafoni, P. Ciotti, F.S. Marzano, G. D'Auria and N. Pierdicca, "The use of time correlation in designing algorithms for microwave radiometric retrieval of atmospheric temperature profiles", *Atti della Fondazione Giorgio Ronchi*, Anno LIV, N. 3-4, pp. 483-493, 1999, ISSN: 0391-2051.
- [N.2] P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti and E. Fionda, "Measurements and modeling of precipitable water vapour in the Mediterranean area by GPS and microwave radiometry", *Atti della Fondazione Giorgio Ronchi*, Anno LVI, n. 4-5, pp. 1019-1026, 2001, ISSN: 0391-2051.
- [N.3] P. Basili, P. Ciotti, E. Fionda, S. Bonafoni, "Retrieval of atmospheric water by ground-based microwave radiometry: comparison of physical, statistical and neural network based algorithms", *Atti della Fondazione Giorgio Ronchi*, Anno LVII, n. 4, pp. 727-730, 2002, ISSN: 0391-2051.
- [N.4] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, F.S. Marzano, G. d'Auria, N. Pierdicca and L. Pulvirenti, "Microwave remote sensing of precipitable water vapour: integration of GPS and SSM/I measurements", *Rivista Italiana di Telerilevamento*, 26, 27, 28, pp 5-10, 2003, ISSN: 1129-8596.
- [N.5] P. Basili, S. Bonafoni, R. Biondi, P. Ciotti, E. Fionda, "Neural Networks and polynomial regressions for the retrieval of atmospheric water vapour and rain rate by ground-based microwave radiometry", *Atti della Fondazione Giorgio Ronchi*, Anno LIX, n. 1-2, pp. 57-60, 2004, ISSN: 0391-2051.
- [N.6] P. Basili, S. Bonafoni, R. Biondi, "Analisi e previsione di temperature minime e di gelate sul bacino del Trasimeno", *Rivista Italiana di Agrometeorologia*, n.1/2006, pp. 46-50, Aprile 2006, ISSN: 1824-8705.
- [N.7] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E. Fionda, E. R. Westwater, "Experimental campaigns for *IPWV* estimates in the atmosphere: comparisons between dual-channel microwave radiometers, Global Positioning Systems and radiosondes", *Rivista Italiana di Telerilevamento*, 35, pp 35-44, 2006, ISSN: 1129-8596.

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### **Congressi internazionali**

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- [ic.1] P. Basili, S. Bonafoni, P. Ciotti, G. d'Auria, F.S. Marzano and N. Pierdicca, "The Role of a priori Information in Designing Retrieval Algorithms for Radiometric Profiling of the Atmosphere", Proc. of IEEE/IGARSS '97, pp. 2100-2102, Singapore, 2-9 August, 1997.
- [ic.2] P. Basili, S. Bonafoni, P. Ciotti, F.S. Marzano, G. d'Auria and N. Pierdicca, "Microwave radiometric retrieval of atmospheric temperature profiles by using temporal and spatial correlations", Proc. of PIERS'98, p.126, Nantes, France, 13-17 July, 1998.
- [ic.3] G. d'Auria N. Pierdicca, P. Basili, S. Bonafoni, P. Ciotti and F.S. Marzano, "SSM/I data analysis for retrieving cloud properties and comparisons with ground based measurements", VI Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, pp.44-45, Florence, Italy, 16-18 March, 1999.
- [ic.4] P. Basili, S. Bonafoni and P. Ciotti, "Use of a ground-based Global Positioning System network for monitoring integrated precipitable water vapour", Proc. of Energy, Environment and Technological Innovation, pp. 1133-1138, Rome, Italy, 20 -24 September, 1999.
- [ic.5] G. d'Auria, N. Pierdicca, P. Basili, S. Bonafoni, P. Ciotti and F.S. Marzano, "A comparison of cloud observations by spaceborn microwave radiometry to rain-gauge measurements", Proc. of Energy, Environment and Technological Innovation, pp. 1139-1144, Rome, Italy, 20-24 September, 1999.
- [ic.6] P. Basili, S. Bonafoni, P. Ciotti, E. Fionda, and R. Ambrosini, "Remote sensing of atmospheric precipitable water vapour by GPS: comparison with radiosondes and a microwave water vapour radiometer", Millennium Conference on Antennas & Propagation (AP-2000), CD p.16, Davos, Switzerland, 9-14 April, 2000.
- [ic.7] P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti, E. Fionda and R. Ambrosini, "Experimental campaign for the assessment of atmospheric water vapour retrieval by means of a GPS network", Proc. of IEEE/IGARSS 2000, vol. 7, pp. 3078-3080, Honolulu, Hawaii, 24-28 July, 2000.
- [ic.8] P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti, E. Fionda, B. Betti, R. Prini, V. Tornatore, M. Crespi, S. Di Paola, V. Baiocchi and F. Radicioni, "Assessment of precipitable water vapour by use of a local GPS network and microwave ground-based radiometer", Proc. of 11th IEE/ICAP 2001, vol.1, pp. 72-76, Manchester (UK), 17-20 April, 2001.
- [ic.9] P. Basili, S. Bonafoni, R. Ferrara, V. Mattioli, P. Ciotti and E. Fionda "GPS measurements for mapping atmospheric water vapour during a flood in the north Italy", Specialist Conference on Microwave Remote Sensing 2001, pp.103-104, Boulder, Colorado, USA, 5-9 November, 2001.
- [ic.10] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, F.S. Marzano, G. d'Auria, N. Pierdicca, and L. Pulvirenti, "Comparison of water vapour measurements by GPS receivers and microwave radiometers and possible integration approach", Specialist Conference on Microwave Remote Sensing 2001, pp. 132-133, Boulder, Colorado, USA, 5-9 November, 2001.
- [ic.11] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti and G. d'Auria, "Monitoring atmospheric water vapour using GPS measurements during precipitation events", Proc. of IEEE/IGARSS 2002, vol.1, pp. 60-62, Toronto, Canada, 24-28 June, 2002.
- [ic.12] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, F.S. Marzano, G. d'Auria, N. Pierdicca and L. Pulvirenti, "Mapping of precipitable water vapour by integrating measurements of ground-based GPS receivers and satellite-based microwave radiometers", Proc. of IEEE/IGARSS 2002, vol.2, pp. 1275-1277, Toronto, Canada, 24-28 June, 2002.
- [ic.13] N. Pierdicca, B. Greco, A. Martini, P. Castracane, L. Pulvirenti, P. Ferrazzoli, L. Guerriero, G. Schiavon, P. Ciotti, F.S. Marzano, P. Basili, S. Bonafoni and V. Mattioli, "Passive calibration of the backscattering coefficient of the ENVISAT RA-2: evaluation of the radiative models for sea and land", Proc. of IEEE/IGARSS 2002, vol. 6, pp. 3105-3107, Toronto, Canada, 24-28 June, 2002.

- [ic.14] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti and G. d'Auria, "Ground-based GPS receiver and microwave radiometer to characterise water vapour of precipitation events", Proc. of URSI 2002, CD p. 84, Maastricht, Holland, 17-24 August, 2002.
- [ic.15] P. Ciotti, E. Di Giampaolo, P. Basili, S. Bonafoni, V. Mattioli, R. Biondi, E. Fionda, A. Memmo, R. Pacione, F. Vespe, "Preliminary results of the validation of Meris water vapour in the central Italy", EGS-AGU-EUG Joint Assembly, Nice, France, 6 - 11 April, 2003.
- [ic.16] P. Ciotti, E. Di Giampaolo, P. Basili, S. Bonafoni, V. Mattioli, R. Biondi, E. Fionda, F. Consalvi, A. Memmo, D. Cimini, R. Pacione, F. Vespe, "Validation of MERIS water vapour in the central Italy by concurrent measurements of microwave radiometers and GPS receivers", Proc. of IEEE/IGARSS 2003, vol. 5, pp. 3123-3125, Toulouse, France, 21-25 July, 2003.
- [ic.17] P. Basili, S. Bonafoni, R. Biondi, V. Mattioli, P. Ciotti, "Monitoring of atmospheric water around precipitation events using a scanning ground-based microwave radiometer", Proc. of IEEE/IGARSS 2003, vol. 5, pp. 3196-3198, Toulouse, France, 21-25 July, 2003.
- [ic.18] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, N. Pierdicca and L. Pulvirenti, "Comparing model analysis and remote sensing estimation of water vapour field over the Tyrrhenian area", Proc. of 2003 Tyrrhenian International Workshop on Remote Sensing, Elba Island, Italy, pp. 497-505, 15-18 September, 2003.
- [ic.19] P. Basili, M. Caponi, S. Bonafoni, V. Mattioli "Integration of digital elevation data laser scanning 3D and interferometric SAR System", Proc. of IEEE/IGARSS 2004, vol.5, pp. 2811-2814, Anchorage, Alaska, 20-24 September, 2004,
- [ic.20] F. Alimenti, S. Bonafoni, V. Palazzari, L. Roselli, A. Scorzoni, P. Basili "On the Feasibility of Single-Chip SiGe Microwave Radiometric Sensors", 34th European Microwave Conference 2004, Volume 2, pp. 1033-1036, Amsterdam, October, 2004.
- [ic.21] P. Basili, S. Bonafoni, R. Biondi, P. Ciotti, "Ground-based microwave measurements to monitor atmospheric parameters around precipitation events" 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Rome, Italy, 24-27 February, 2004. Proc. of 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Atti della Fondazione Ronchi, vol. LX, n. 1-2, pp. 1-200, 2005.
- [ic.22] F. Alimenti, S. Bonafoni, V. Palazzari, L. Roselli, A. Scorzoni, P. Basili, "SiGe Technology and Radiometric applications: Present Possibilities and Future Trends", 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Rome, Italy, 24-27 February, 2004. Proc. of 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Atti della Fondazione Ronchi, vol. LX, n. 1-2, pp. 1-200, 2005.
- [ic.23] P. Ciotti, E. Di Giampaolo, P. Basili, S. Bonafoni, V. Mattioli, R. Biondi, E. Fionda, F. Consalvi, A. Memmo, D. Cimini, R. Pacione, F. Vespe, "A multisensor campaign in the central Italy for the validation of the ENVISAT/MERIS retrievals of atmospheric water vapor" 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Rome, Italy, 24-27 February, 2004. Proc. of 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Atti della Fondazione Ronchi, vol. LX, n. 1-2, pp. 1-200, 2005.
- [ic.24] A. Memmo, D. Cimini, T. Paolucci, R. Ferretti, S. Bonafoni, E. Fionda, P. Ciotti, "Long-term validation of MM5 integrated water vapour field by using microwave radiometer and GPS measurements" 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Rome, Italy, 24-27 February, 2004. Proc. of 8th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Atti della Fondazione Ronchi, vol. LX, n. 1-2, pp. 1-200, 2005.
- [ic.25] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E.R. Westwater, "Analysis and improvement of cloud models for brightness temperature simulations", 9th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, pp. 296-300, Puerto Rico, 28 February-3 March 2006.



- [ic.26] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E. R. Westwater, "Cloud model studies for the simulation of brightness temperatures", Proc. of IEEE/IGARSS 2006, pp. 529-532, Denver, Colorado, July-August, 2006.
- [ic.27] F. Alimenti, S. Bonafoni, S. Leone, V. Mattioli, V. Palazzari, G. Tasselli, M. Strappini, P. Basili, L. Roselli, "Development of a low-cost microwave radiometer for the early detection of fire in forest environments", 36th European Microwave Conference 2006, pp.1497-1500, Manchester UK, September, 2006.
- [ic.28] A. Kalauzi, M. Cukic, H. M. Vega, S. Bonafoni, R. Biondi, "Fractal rhythms and trends of rainfall data from Pastaza province, Ecuador and Veneto, Italy", Lecture Series on Computer and Computational Sciences (Eds.: T. Simos, G. Maroulis), Vol. 7A: Recent Progress in Computational Sciences and Engineering, selected papers from the International Conference of Computational Methods in Sciences and Engineering, pp. 241-244, Crete, Greece, November 2006.
- [ic.29] V. Mattioli, P. Basili, S. Bonafoni, P. Ciotti, L. Pulvirenti, N. Pierdicca, F.S. Marzano, E. Fionda, F. Consalvi, E.R. Westwater, "Cloud liquid models for propagation studies: evaluation and refinements", EuCAP 2006, Nice, France, 6-10 November 2006.
- [ic.30] P. Basili, S. Bonafoni, V. Mattioli, F. Pelliccia, P. Ciotti, "Neural Networks for tropospheric profiling from GPS-LEO radio occultation", Proc. of IEEE/IGARSS 2007, pp. 1693-1696, Barcelona, Spain, 23-27 July, 2007.
- [ic.31] P. Basili, S. Bonafoni, V. Mattioli, F. Pelliccia, A. Serpolla, E. Bocci, P. Ciotti, "Development of a neural network for precipitable water vapour retrieval over ocean and land", 10th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Florence, Italy, 11-14 March 2008.
- [ic.32] F. Alimenti, T. Kempka, G. Tasselli, S. Bonafoni, P. Basili, L. Roselli, K. Solbach, H.I. Willms, "Fire detection by low-cost microwave radiometric sensors", 10th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Florence, Italy, 11-14 March 2008.
- [ic.33] F. Alimenti, G. Tasselli, S. Bonafoni, D. Zito, L. Roselli, "Inter-Wall Fire Detection by Low-Cost Microwave Radiometric Sensors", 38th European Microwave Conference 2008, Amsterdam, 27-31 October 2008.
- [ic.34] F. Pelliccia, S. Bonafoni, P. Basili, P. Ciotti, N. Pierdicca, V. De Cosmo, "COSMIC GPS radio occultation: neural networks for tropospheric profiling over the intertropical ocean area" 13th Conference on Integrated Observing and Assimilation Systems for Atmosphere, Oceans, and Land Surface (IOAS-AOLS), Phoenix, AZ, 11-15 January 2009,
- [ic.35] N. Pierdicca, F. Rocca, P. Basili, S. Bonafoni, D. Cimini, P. Ciotti, R. Ferretti, W. Foster, F.S. Marzano, V. Mattioli, M. Montopoli, R. Notarpietro, S. Padmanabhan, D. Perissin, E. Pichelli, S. Reising, S. Sahoo, G. Venuti, "Atmospheric water-vapour effects on spaceborn Interferometric SAR imaging: data synergy and comparison with ground-based measurements and meteorological model simulations at urban scale", EUCAP 2009, Berlin, Germany, 23-27 March, 2009.
- [ic.36] M. Montopoli, F.S. Marzano, E. Pichelli, D. Cimini, R. Ferretti, S. Bonafoni, D. Perissin, F. Rocca, N. Pierdicca, "High resolution space characterization of water vapor from satellite measurements and local area model" EGU General Assembly 2009, Vienna, Austria, 19-24 April, 2009.
- [ic.37] N. Pierdicca, F. Rocca, B. Rommen, P. Basili, S. Bonafoni, D. Cimini, P. Ciotti, F. Consalvi, R. Ferretti, W. Foster, F.S. Marzano, V. Mattioli, A. Mazzoni, M. Montopoli, R. Notarpietro, S. Padmanabhan, D. Perissin, E. Pichelli, S. Reising, S. Sahoo, and G. Venuti, "Atmospheric water-vapor effects on spaceborne Interferometric SAR imaging: comparison with ground-based measurements and meteorological model simulations at different scales", Proc. of IEEE/IGARSS'09, Cape Town, South Africa, 12-17 July 2009.
- [ic.38] F. Alimenti, G. Tasselli, S. Bonafoni, L. Roselli, P. Basili, "Remote sensing of masked fire spots by low-cost microwave radiometers", Proc. of the 14th International Conference on Automatic Fire Detection, AUBE'09, Duisburg, Germany, pp. 293-300, 8-10 September 2009.

- [ic.39] P. Basili, S. Bonafoni, V. Mattioli, F. Pelliccia, P. Ciotti, G. Carlesimo, N. Pierdicca, G. Venuti, A. Mazzoni, "Neural-network retrieval of Integrated Precipitable Water Vapor over land from satellite microwave radiometer", 11th Specialist Meeting on Microwave Radiometry and Remote Sensing Applications, Washington, DC, USA, 1-4 March 2010.
- [ic.40] V. Mattioli, S. Bonafoni, P. Basili, G. Carlesimo, P. Ciotti, L. Pulvirenti, N. Pierdicca, "Neural network for the satellite retrieval of precipitable water vapor over land", Proc. of IEEE/IGARSS 2010, Honolulu, Hawaii, pp. 2960-2963, 25-30 July 2010.
- [ic.41] M. Montopoli, F.S. Marzano, E. Pichelli, D. Cimini, R. Ferretti, S. Bonafoni, D. Peressin, F. Rocca, N. Pierdicca, "Water vapor integration methods to improve the quality of Synthetic Aperture Radar observations", 6<sup>th</sup> ERAD, Sibiu, Romania, 6-10 September 2010.
- [ic.42] A. Bosisio, P. Basili, S. Bonafoni, P. Ciotti, G. Carlesimo, E. Fionda, A. Martellucci, "A proposed criterion to filter out rainy sky thermal microwave emissions collected at the ground from a multi-channel radiometer", URSI Commission F Microwave Signatures 2010, p. 92, Florence, Italy, 4-8 Oct. 2010.
- [ic.43] N. Pierdicca, F. Rocca, B. Rommen, P. Basili, S. Bonafoni, G. Carlesimo, D. Cimini, P. Ciotti, R. Ferretti, F.S. Marzano, V. Mattioli, M. Montopoli, R. Notarpietro, D. Peressin, E. Pichelli, G. Venuti, "Synergic Use of EO, NWP and Ground Based Measurements for the Characterisation of Vapour Fields", 5th European Conference on Antennas and Propagation, EUCAP 2011, Rome, Italy, 11-15 April 2011.
- [ic.44] N. Pierdicca, F. Rocca, P. Basili, S. Bonafoni, G. Carlesimo, D. Cimini, P. Ciotti, R. Ferretti, F.S. Marzano, V. Mattioli, M. Montopoli, R. Notarpietro, D. Peressin, E. Pichelli, B. Rommen, G. Venuti, "Synergic use of EO, NWP and ground based measurements for the mitigation of vapour artefacts in SAR interferometry", Proc. of IEEE/IGARSS 2011, Vancouver, British Columbia, Canada, pp. 2566-2569, 24-29 July 2011.
- [ic.45] N. Pierdicca, P. Ciotti, P. Basili, S. Bonafoni, "Feasibility of a satellite microwave radiometer to mitigate tropospheric effects in SAR interferometry", 12th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment, Rome, 5-9 March, 2012.
- [ic.46] S. Bonafoni, R. Anniballe, M. Pichierri. "Comparison between surface and canopy layer urban heat island using MODIS data", JURSE 2015, Losanna, Switzerland, 30 March-1 April 2015, pp 1-4; doi: 10.1109/JURSE.2015.7120457.
- [ic.47] S. Bonafoni, R. Anniballe, N. Pierdicca, "Downscaling of the Land Surface Temperature over urban area using Landsat data", Proc. of IEEE/IGARSS 2015, Milan, Italy, 26-31 July 2015, pp. 1144 – 1147; doi: 10.1109/IGARSS.2015.7325973
- [ic.48] G. Baldinelli, S. Bonafoni, "Analysis of albedo influence on surface urban heat island by spaceborne detection and airborne thermography", ICIAP 2015, LNCS 9281, Genova, Italy, 7-8 September 2015, pp. 95–102, 2015.
- [ic.49] A. Goswami, P. Mohammad, A. Sattar, R. Mahanta, S. Bonafoni, "An Urban Heat Island magnitude study over the city of Guwahati-An integration of Remote Sensing and Ground based approach", CESDOC 2016, Guwahati, India, 19-21 December 2016.
- [ic.50] P. Mohammad, A. Goswami, A. Sattar, S. Bonafoni, "A remote sensing approach to study the temporal growth of the urban limits for the city of Hyderabad from 2001-2015", CESDOC 2016, Guwahati, India, 19-21 December 2016.
- [ic.51] S. Bonafoni, G. Baldinelli, A. Rotili, P. Verducci, "Albedo and surface temperature relation in urban areas: analysis with different sensors", Joint Urban Remote Sensing Event (JURSE) 2017, Dubai 6-8 March 2017, pp.1-4, doi: 10.1109/JURSE.2017.7924612.

- [ic.52] S. Bonafoni, C. Keeratikasikorn, "Remote sensing of the urban heat island with different spatial and temporal resolutions: analysis by MODIS and LANDSAT imagery" The IX Conference of the Italian Society of Remote Sensing, Florence, 4-6 July 2018, in vol. Earth observation advancements in a changing world, Ed. Chirici G. and Gianinetto M., AIT Series: Trends in earth observation, pp.191-194, July 2019, ISBN: 978-88-944687-1-7.
- [ic.53] A. Sekertekin, S. Kartal, Q. Liu, S. Bonafoni, "A modified deep learning approach for reconstruction of MODIS LST product", GIS Ostrava 2022 Conference, Earth Observation for Smart City and Smart Region, Ostrava, Czech Republic, 16-18 March 2022.
- [ic.54] P. Filippucci, L. Brocca, S. Bonafoni, A. Tarpanelli, "River Discharge estimation from optical satellite data: latest advances using NIR sensors", EGU General Assembly 2022, Vienna, Austria, 23-27 May 2022, EGU22-3513, doi: 10.5194/egusphere-egu22-3513, 2022
- [ic.55] V. Palazzi, L. Balocchi, S. Bonafoni, L. Roselli, "Slot-fed Dual-Port Patch Antenna for Compact Harmonic Transponders", 2022 IEEE 12th International Conference on RFID Technology and Applications (RFID-TA), 2022, pp. 86-89, doi: 10.1109/RFID-TA54958.2022.9924075.
- [ic.56] A.P. Prathiba, K. Jain, A. Tiwari, S. Bonafoni, "Investigating the Relationship of land surface temperatures with varying surface parameters over India's National Capital Region (NCR)", AGU Fall Meeting 2022, Chicago, USA, 12-16 December 2022.
- [ic.57] L. Balocchi, V. Palazzi, S. Bonafoni, F. Alimenti, P. Mezzanotte and L. Roselli, "Wireless Passive Temperature Sensor based on a Harmonic Transponder and a Thermistor", 2023 IEEE 13th International Conference on RFID Technology and Applications (RFID-TA), Aveiro, Portugal, 2023, pp. 150-153, doi: 10.1109/RFID-TA58140.2023.10290431.
- [ic.58] I. Petracca, D. Latini, S. Bonafoni, F. Del Frate, M. Di Giacomo, F. Niro, S. Casadio, G. Schiavon, "Use of Unmanned Aerial System for the Characterization of the Surface Reflectance Distribution Function," IGARSS 2023 - 2023 IEEE International Geoscience and Remote Sensing Symposium, Pasadena, CA, USA, 2023, pp. 4796-4799, doi: 10.1109/IGARSS52108.2023.10282006.
- [ic.59] P. A. Palanisamy, J. Zawadzka, K. Jain, S. Bonafoni, "MONITORING SUMMER DAYTIME AND NIGHTTIME DECADEAL TRENDS OF LAND SURFACE TEMPERATURE OVER THE NATIONAL CAPITAL REGION DELHI, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-1/W2-2023, 1491–1497, <https://doi.org/10.5194/isprs-archives-XLVIII-1-W2-2023-1491-2023>, ISPRS Geospatial Week 2023, 2–7 September 2023, Cairo, Egypt.
- [ic.60] F. Rossi, S. Bonafoni, A. Di Giuseppe, M. Filipponi, B. Castellani, A. Pazzaglia, A. Presciutti, A. Nicolini, "Experimental test of measurement-based procedure for CO2 compensation by albedo", Proceedings of the 6th International Conference on Countermeasures to Urban Heat Islands (IC2UHI 2023), Melbourne, Australia, 2023.
- [ic.61] F. Rossi, S. Bonafoni, A. Di Giuseppe, M. Filipponi, B. Castellani, A. Pazzaglia, A. Presciutti, A. Nicolini, "Satellite albedo measurement: a novel procedure" Proceedings of the 6th International Conference on Countermeasures to Urban Heat Islands (IC2UHI 2023), Melbourne, Australia, 2023.

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### Congressi nazionali

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- [nc.1] P. Basili, S. Bonafoni, P. Ciotti, F. S. Marzano, G. d'Auria, N. Pierdicca, "Stima di profili di temperatura a partire da misure radiometriche a microonde da satellite", VII Riunione Annuale CeTeM (Centro di Telerilevamento a Microonde), Perugia, 17-18 Settembre, 1997
- [nc.2] P. Basili, S. Bonafoni, P. Ciotti, F.S. Marzano, G. D'Auria, N. Pierdicca, "Radiometria a microonde per la stima di profili di temperatura atmosferica sull'Italia mediante tecniche di assimilazione dati basate su

correlazioni spazio temporali", Atti della XII Riunione Nazionale di Elettromagnetismo, pp. 519-522, Cetraro (CS), 28 Settembre-1 Ottobre, 1998.

- [nc.3] P. Basili, S. Bonafoni, P. Ciotti, F. S. Marzano, G. d'Auria, N. Pierdicca, "Radiometria a microonde per la stima di profili di temperatura atmosferica sull'Italia mediante tecniche di assimilazione dati basate su correlazioni spazio temporali", VIII Riunione Annuale CeTeM (Centro di Telerilevamento a Microonde), Firenze, 8-9 Ottobre, 1998
- [nc.4] P. Basili, S. Bonafoni, P. Ciotti, "Utilizzo di una rete GPS per la stima di vapor d'acqua nell'atmosfera", IX Riunione Annuale CeTeM (Centro di Telerilevamento a Microonde), Roma, 7-8 Ottobre, 1999
- [nc.5] P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti, E. Fionda, "Stima di vapore integrato con il GPS: campagna di validazione e sviluppo di modelli", Atti della XIII Riunione Nazionale di Elettromagnetismo, pp. 145-148, Villa Olmo (Como), 25-28 Settembre, 2000.
- [nc.6] B. Betti, R. Prini, V. Tornatore, M. Crespi, S. Di Paola, V. Baiocchi, F. Radicioni, P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti e E. Fionda, "Determinazione del contenuto di vapor acqueo precipitabile con misure GPS in reti locali e misure radiometriche: primi confronti", Atti della IV Conferenza Nazionale ASITA, vol. 1, pp. 453-461, Genova, 3-6 Ottobre, 2000.
- [nc.7] P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti e E. Fionda, "Campagna sperimentale per la stima di vapore con GPS e radiometro a microonde", Atti della 10a Riunione Annuale CeTeM, pp. 34-38, Prato, 26-27 Ottobre, 2000.
- [nc.8] B. Betti, V. Tornatore, M. Crespi, S. Di Paola, V. Baiocchi, P. Basili, S. Bonafoni, R. Ferrara, P. Ciotti, E. Fionda, "Stima del ritardo troposferico zenitale e direzionale con GPS e radiometro: problemi e confronti", Atti della V Conferenza Nazionale ASITA, vol.1, pp. 205-214, Rimini, 9-12 Ottobre, 2001.
- [nc.9] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E. Fionda, "Monitoraggio di eventi precipitativi in banda L: analisi del vapore integrato a livello puntuale e bidimensionale", Atti della XIV Riunione Nazionale di Elettromagnetismo, pp. 536-539, Ancona, 16-19 Settembre, 2002.
- [nc.10] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, F.S. Marzano, G. d'Auria, N. Pierdicca, L. Pulvirenti, "Assimilazione dati di misure GPS a terra e radiometriche da satellite per la produzione di mappe di vapor d'acqua atmosferico", Atti della XIV Riunione Nazionale di Elettromagnetismo, pp. 532-535, Ancona, 16-19 Settembre, 2002.
- [nc.11] N. Pierdicca, B. Greco, A. Martini, P. Castracane, L. Pulvirenti, P. Ferrazzoli, L. Guerriero, G. Schiavon, P. Ciotti, F.S. Marzano, P. Basili, S. Bonafoni, V. Mattioli, "Simulazione della temperatura di brillanza della superficie terrestre: validazione di modelli applicati alla calibrazione di sensori satellitari", Atti della XIV Riunione Nazionale di Elettromagnetismo, pp. 628-631, Ancona, 16-19 Settembre, 2002.
- [nc.12] P. Basili, S. Bonafoni, R. Biondi, P. Ciotti "The use of a microwave radiometer to monitor atmospheric water before rainy events", 2004 IEEE GOLD Remote Sensing Conference, Napoli, 13-14 Maggio, 2004.
- [nc.13] P. Basili, S. Bonafoni, R. Biondi, P. Ciotti, "Previsione di eventi precipitativi: analisi preliminare del contributo di vari strumenti a diverse frequenze", Atti della XV Riunione Nazionale di Elettromagnetismo, pp. 621-624, Cagliari, 13-16 Settembre, 2004.
- [nc.14] P. Basili, S. Bonafoni, M. Caponi, "Tecniche di 'change detection' attraverso l'utilizzo del sensore laser scannino 3D", Atti della XV Riunione Nazionale di Elettromagnetismo, pp. 325-328, Cagliari, 13-16 Settembre, 2004.
- [nc.15] P. Basili, S. Bonafoni, R. Biondi, E. Bocci, A. Serpolla "Telerilevamento da satellite di eventi precipitativi: analisi sul bacino del Trasimeno" Atti della IX Conferenza Nazionale ASITA, Catania, 15-18 Novembre, 2005.

- [nc.16] P. Basili, S. Bonafoni, R. Biondi "Gestione real-time, analisi e previsione di temperature estreme sul bacino del Trasimeno" Atti della IX Conferenza Nazionale ASITA, Catania, 15-18 Novembre, 2005.
- [nc.17] P. Basili, S. Bonafoni, R. Biondi, F. Pelliccia, "Telerilevamento di eventi precipitativi da satellite con sensori a infrarosso", Atti della XVI Riunione Nazionale di Elettromagnetismo, pp. 512-515, Genova, 18-21 Settembre, 2006.
- [nc.18] P. Basili, S. Bonafoni, V. Mattioli, E.R. Westwater, "Analisi e sviluppo di modelli per l'individuazione di nubi per la simulazione della temperatura di brillanza", Atti della XVI Riunione Nazionale di Elettromagnetismo, pp. 516-519, Genova, 18-21 Settembre, 2006.
- [nc.19] P. Basili, S. Bonafoni, V. Mattioli, F. Pelliccia, P. Ciotti, "Radio occultamento con GPS-LEO: stima di profili troposferici tramite reti neurali", Atti della XI Conferenza Nazionale ASITA, Torino, 6-9 Novembre, 2007.
- [nc.20] F. Pelliccia, S. Bonafoni, P. Basili, P. Ciotti, N. Pierdicca, "Development of neural networks for tropospheric profiling from cosmic GPS radio occultation", 2008 IEEE GOLD Remote Sensing Conference, ESA/ESRIN, Frascati, 22-23 Maggio, 2008.
- [nc.21] E. Bocci, S. Bonafoni, R. Biondi, O. Arinò, "Aerosol Optical Depth: validation and retrievals during dust outbreaks over the Mediterranean area", 2008 IEEE GOLD Remote Sensing Conference, ESA/ESRIN, Frascati, 22-23 Maggio, 2008.
- [nc.22] A. Serpolla, S. Bonafoni, P. Basili, R. Biondi, O. Arino, "Validation of MERIS L2 water vapour products in the Mediterranean area and North East Australia", 2008 IEEE GOLD Remote Sensing Conference, ESA/ESRIN, Frascati, Italy, May 22-23, 2008
- [nc.23] F. Pelliccia, S. Bonafoni, P. Basili, P. Ciotti, N. Pierdicca, "Sviluppo di reti neurali per la determinazione di parametri atmosferici da radio occultazione GPS-COSMIC", Atti della XVII Riunione Nazionale di Elettromagnetismo, CD, Lecce, 15-19 Settembre, 2008.
- [nc.24] V. Mattioli, S. Bonafoni, E.R. Westwater, A.J. Gasiewski, M. Klein, V. Leusky, D. Cimini, D.D. Turner, "Stime accurate di vapore e liquido integrato in ambiente artico", Atti della XVII Riunione Nazionale di Elettromagnetismo, CD, Lecce, 15-19 Settembre, 2008.
- [nc.25] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E. Fionda, A. Martellucci, "Esperimento Cabauw: algoritmi d'inversione per la stima di parametri atmosferici con radiometri a microonde da terra", Atti della XVII Riunione Nazionale di Elettromagnetismo, CD, Lecce, 15-19 Settembre, 2008.
- [nc.26] V. Mattioli, P. Basili, S. Bonafoni, N. Pierdicca, F.S. Marzano, C. Capsoni, "Analysis and validation of Earth Observation data for propagation tools", Atti della XVIII Riunione Nazionale di Elettromagnetismo, CD, Benevento, 6-10 Settembre, 2010.
- [nc.27] R. Anniballe, S. Bonafoni, N. Pierdicca, "Surface and air heat island of Milan: spatial and temporal analysis from MODIS", Atti della XX Riunione Nazionale di Elettromagnetismo, pp. 45-48, Padova, 15-18 Settembre 2014,.
- [nc.28] F. Alimenti, S. Bonafoni, V. Palazzi, P. Mezzanotte, L. Roselli, "Measurement of River Surface Velocity by Low-Cost Doppler Radar Sensors", SIE 2019 (51th Annual Meeting of the Associazione Società Italiana di Elettronica), Roma, 26-28 Giugno, 2019.
- [nc.29] S. Bonafoni, A. Sekertekin, "Determination of new conversion coefficients for Sentinel-2-based albedo retrieval and accuracy analysis", VIII Uzal CBS 2022 Symposium, Ankara, 17-18 November, 2022

- [w.1] P. Ciotti, P. Basili, S. Bonafoni, E. Fionda, F.S. Marzano, E. Di Giampaolo, G. d'Auria and N. Pierdicca, "Validation and integration of ENVISAT Atmospheric Products: measurements of Integrated Precipitable Water Vapour (IPWV) and temperature profile over Italy", ENVISAT Workshop, Matera, Italy, 30 Maggio - 1 Giugno, 2001.
- [w.2] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, F.S. Marzano, N. Pierdicca, L. Pulvirenti, G. d'Auria, "Telerilevamento a microonde del vapor d'acqua atmosferico: processo di assimilazione dati di misure GPS e SSM/I per la produzione di mappe sul mediterraneo", II Workshop AIT sul Telerilevamento a Microonde–XI Riunione Annuale CeTeM, Firenze, 16-17 maggio 2002.
- [w.3] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti and E. Fionda, "A ground-based microwave radiometer and a GPS network for the remote sensing of atmospheric water vapour content: a year of experimental results", <http://www.cost720.rl.ac.uk/>: 1st COST 720 Action Workshop "Integrated Ground-Based Remote Sensing Stations for Atmospheric Profiling", L'Aquila (Italy), June 19-21, 2002.
- [w.4] B. Greco, N. Pierdicca, P. Castracane, L. Pulvirenti, P. Ferrazzoli, L. Guerriero, G. Schiavon, P. Ciotti, F.S. Marzano, P. Basili, S. Bonafoni, V. Mattioli, "Preliminary passive calibration of the backscattering coefficient of the RA-2", ENVISAT Validation Workshop, ESA/ESRIN, Frascati, Italy, 9-13 December, 2002.
- [w.5] P. Ciotti, E. Di Giampaolo, P. Basili, S. Bonafoni, V. Mattioli, R. Biondi, E. Fionda, F. Consalvi, A. Memmo, R. Pacione and F. Vespe, "A measurement campaign in the central Italy for the validation of MERIS water vapour: preliminary results", ENVISAT Validation Workshop, ESA/ESRIN, Frascati, Italy, 9-13 December, 2002.
- [w.6] N. Pierdicca, B. Greco, C. Bignami, L. Pulvirenti, P. Ferrazzoli, L. Guerriero, G. Schiavon, P. Ciotti, F.S. Marzano, P. Basili, S. Bonafoni, V. Mattioli, "The RA-2 receiver gain based on the passive calibration", CCVT-RA2 Plenary Meeting ESRIN, Frascati, 25-27 March, 2003.
- [w.7] P. Ciotti, P. Basili, S. Bonafoni, R. Biondi, E. Fionda, A. Memmo, R. Pacione, F. Vespe, "Concurrent water vapour observations in the central Italy from MERIS/ENVISAT and ground-based tools", Special Symposium of the URSI Joint Working Group FG: Atmospheric Remote Sensing Using Satellite Navigation Systems, Matera, Italy, 13 - 15 October, 2003.
- [w.8] P. Ciotti, E. Di Giampaolo, P. Basili, S. Bonafoni, V. Mattioli, R. Biondi, E. Fionda, F. Consalvi, A. Memmo, D. Cimini, R. Pacione, F. Vespe, "MERIS IPWV validation: a multisensor experimental campaign in the Central Italy", MERIS User Workshop, ESA/ESRIN, Frascati, Italy, 10 - 13 November, 2003.
- [w.9] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E. Fionda, E.R. Westwater, "Campagne sperimentali per la stima del contenuto di vapor d'acqua nell'atmosfera: confronto tra radiometri a microonde, GPS e radiosonde", III Workshop AIT sul Telerilevamento a Microonde–XII Riunione Annuale CeTeM, Napoli, 25-26 novembre 2004.
- [w.10] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E. Fionda, E. R. Westwater, "Cloud model studies for the simulation of brightness temperatures: improvements and applications to cloud classification from radiosoundings", IUGG2007/MS003 Symposium on Aerosol, Radiation and Clouds, 2-6 July 2007, Perugia.
- [w.11] F. Pelliccia, S. Bonafoni, P. Basili, N. Pierdicca, P. Ciotti, "Radio occultazione Cosmic GPS: sviluppo di reti neurali per la stima di profili troposferici", V Workshop AIT sul Telerilevamento a Microonde–XIV Riunione Annuale CeTeM, Roma, 23-24 Ottobre 2008.
- [w.12] P. Basili, S. Bonafoni, V. Mattioli, P. Ciotti, E. Fionda, A. Martellucci, "Retrieval algorithms of atmospheric parameters using thermal emission by surface-based microwave radiometer observed in Cabauw", ESA Workshop on Radiowave Propagation 2008, ESTEC, 3-5 December, 2008.
- [w.13] N. Pierdicca, R. Ferretti, F. S. Marzano, M. Montopoli, P. Basili, R. Notarpietro, D. Perissin, G. Venuti, S. Reising, S. Padmanabhan, S. Sahoo, P. Ciotti, N. Cimini, S. Bonafoni, F. Rocca, "Mapping water

vapour at high resolution: a possible support to coastal altimetry tropospheric corrections”, 3rd Coastal Altimetry Workshop, 17-18 September 2009, ESRIN, Frascati, Italy.

- [w.14] N. Miccoli, S. Bonafoni, A. Martellucci, “Review and assessment of modelling accuracy of tropospheric effects for GNSS”, COST Action IC0802, ISAE/SUPAERO, Toulouse, France 4-6 November 2009.
- [w.15] N. Pierdicca, F. Rocca, B. Rommen, P. Basili, S. Bonafoni, D. Cimini, P. Ciotti, F. Consalvi, R. Ferretti, W. Foster, F.S. Marzano, V. Mattioli, A. Mazzoni, M. Montopoli, R. Notarpietro, S. Padmanabhan, D. Perissin, E. Pichelli, S. Reising, S. Sahoo, and G. Venuti, “Atmospheric water vapour effects on spaceborne Interferometric SAR imaging: an experiment to compare ground-based measurements, spaceborne radiometers and numerical weather prediction model at different scales”, FRINGE 2009 Workshop, ESA/ESRIN, Frascati, Italy, 30 November-4 December, 2009.
- [w.16] R. Biondi, A. K. Steiner, G. Kirchengast, S. Bonafoni, “The potential combined use of GPS radio occultations and ground-based GPS receivers for detecting continental storm intensity”, COST ES1206 GNSS4SWEC Workshop, Munchen, Germany, 26 February – 28 February 2014
- [w.17] R. Biondi, S. Bonafoni, “The synergy of ground based GPS measurements and the GPS radio occultation for analyzing precipitation events”, COST ES1206 GNSS4SWEC Workshop, Thessaloniki, Greece, 11-14 May 2015.
- [w.18] S. Bonafoni, R. Anniballe, N. Pierdicca, “Mapping the Land Surface Temperature over Urban Areas from Space: a Downscaling Approach”, Mapping Urban Areas from Space - MUAS 2015 Workshop, ESA-Esrin, Frascati, Italy, 4-5 November 2015.
- [w.19] N. Pierdicca, S. Bonafoni, D. Cimini, R. Ferretti, F.S. Marzano, F. Rocca, G. Venuti, “Atmospheric water-vapour from spaceborne Interferometric SAR imaging” 1st GEOLab-RISH Workshop on Observation and Models for Meteorology, 22-24 February 2016, Milan, Italy.
- [w.20] S. Bonafoni “Albedo from satellite remote sensing”, conferenza internazionale “Albedo for Africa”, Consiglio Nazionale delle Ricerche, Roma, 25 Ottobre 2017

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## Rapporti tecnici

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- [tr.1] N. Pierdicca., L. Pulvirenti, P. Ciotti, F.S. Marzano, P. Basili, S. Bonafoni, V. Mattioli, P. Ferrazzoli, G. Schiavon, L. Guerriero, “Modelling the brightness temperature and sensor operation requirements”, Phase1 Report ESA ESTEC Contract n. 15925/02/NL/SF, Agosto, 2002.
- [tr.2] R. Biondi, S. Bonafoni, V. Mattioli, “Campagna sperimentale (Perugia 2000 e 2001): stima di vapore integrato (IPWV) mediante l’uso del radiometro WVR-1100 e del ricevitore GPS”, Rapporto interno DIEI, RT-004-02, 22 Novembre, 2002.
- [tr.3] N. Pierdicca., C. Bignami, L. Pulvirenti, P. Ciotti, F.S. Marzano, P. Basili, S. Bonafoni, V. Mattioli, P. Ferrazzoli, G. Schiavon, L. Guerriero, “Passive Calibration of the backscattering coefficient of the Envisat RA-2”, Final Report ESA ESTEC Contract n. 15925/02/NL/SF, Doc. N. DIE/RA2/002, 25 Agosto, 2004.
- [tr.4] I. Ricciarelli, S. Bonafoni, “Simulazione e analisi della tecnica GPS-LEO per la valutazione dei profili di rifrattività atmosferica”, Rapporto interno DIEI, RT-003-04, 22 Settembre, 2004.
- [tr.5] E. Boi, S. Bonafoni, R. Biondi, “Stima del contenuto di acqua liquida nelle nubi (ICL): modelli a confronto”, Rapporto interno DIEI, RT-001-05, 26 Aprile, 2005.
- [tr.6] N. Pierdicca, F. Rocca, P. Basili, S. Bonafoni, N. Cimini, P. Ciotti, R. Ferretti, F.S. Marzano, V. Mattioli, M. Montopoli, R. Notarpietro, D. Perissin, E. Pichelli, G. Venuti, “METAWAVE (Mitigation of

Perugia,

(Firma)