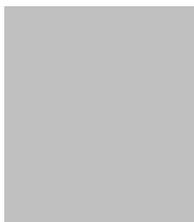


## INFORMAZIONI PERSONALI



## Tommaso Isernia

 Via Terracciano 19 Pozzuoli



 tommaso.isernia@unirc.it



Sesso M | Data di nascita 21/01/1963 | Nazionalità Italiana

## POSIZIONE RICOPERTA

Professore Ordinario di Campi Elettromagnetici presso la Università Mediterranea di Reggio Calabria

## TITOLO DI STUDIO

PhD in Ingegneria Elettronica ed Informatica

ESPERIENZA  
PROFESSIONALE

Professore di Campi Elettromagnetici presso la Università Mediterranea di Reggio Calabria dal 2003

- Coordinatore del Dottorato in Ingegneria dell'Informazione (dal 2014)
- Presidente del CdL in Ingegneria dell'Informazione (2013)
- Presidente del Consiglio congiunto dei CdL in Ingegneria Elettronica (triennale), Ingegneria delle Telecomunicazioni (triennale), Ingegneria Elettronica (magistrale), Ingegneria delle Telecomunicazioni (magistrale) dal 2008 al 2010
- Consigliere di Amministrazione (2005-2007)

Professore Associato di Campi Elettromagnetici presso la Università di Napoli Federico II dal 1998 al 2003

Ricercatore presso Università di Napoli Federico II dal 1992 al 1998

Ingegnere progettista presso Ansaldo Trasporti (1988)

## ISTRUZIONE E FORMAZIONE

Dottorato in Ingegneria Elettronica ed Informatica, 1989-1992  
(presso Università di Napoli Federico II)

Laurea quinquennale con Lode in Ingegneria Elettronica 1982-1988  
(presso Università di Napoli Federico II)

Diploma di maturità classica con il massimo dei voti (presso Liceo Adolfo Pansini di Napoli, 1976-1981)

Lingua madre Italiano

Altre lingue	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
Inglese	B2	B2	B2	B2	B2

Competenze comunicative ▪ Acquisite in anni di didattica e di attività gestionali, sono ritenute (in base ai riscontri) buone.

Competenze organizzative e gestionali Sono state maturate in diversi organi gestionali e di coordinamento in ambito Univesritario, ivi inclusi i Consorzi CNIT e Calpark

Competenze digitali

AUTOVALUTAZIONE				
Elaborazione delle informazioni	Comunicazione	Creazione di Contenuti	Sicurezza	Risoluzione di problemi
Utente intermedio	Utente intermedio	Utente base	Utente base	UTENTE BASE

## ULTERIORI INFORMAZIONI

- Pubblicazioni**
- M.T. Bevacqua, T. Isernia, "A boundary indicator for aspect limited sensing of hidden dielectric objects" accepted for publication on *IEEE Geoscience and Remote Sensing Letters* (accepted march 2018)
  - G.G. Bellizzi, D.A.M. Iero, L. Crocco, T. Isernia "3-D field intensity shaping : the scalar case", *IEEE Antennas and Wireless Propagation Letters*, vol. 17, n.3, pp360-363, 2018
  - T. Isernia, L. Di Donato, A.F. Morabito 'Orbital Angular Momentum Antennas : Understanding actual possibilities through the aperture antennas theory', *IEEE Antennas and Propagation Magazine*, in print (scheduled for the April 2018 issue, already available at <http://ieeexplore.ieee.org/document/8298521>)
  - G.G. Bellizzi, L. Crocco, G. Battaglia, T. Isernia "Multi-frequency constrained SAR focusing for patient-specific Hyperthermia treatment", *IEEE Journal on Electromagnetic Radiation for Medicine (IEEE JERM)*, vol. 1, issue 2, pp. 74-80, 2017
  - L. Di Donato, T. Isernia, G. Labate, L. Matekovits "Towards Printable Natural Dielectric Cloaks via Inverse Scattering Techniques", *Scientific Reports*, 7, article n. 3680 (2017) (available on line).
  - M. Bevacqua, L. Crocco, L. Di Donato, T. Isernia, 'Non linear inverse scattering via sparsity regularized Contrast Source Inversion', *IEEE Trans. on Computational Imaging*, vol. 3, n. 2, pp. 296-304, 2017
  - M. Bevacqua, T. Isernia, 'Shape Reconstruction Via Equivalence Principles, Constrained Inverse

- Source Problems And Sparsity Promotion' *Progress In Electromagnetic Research (PIER)*, vol. 158, pp. 37-48, 2017
- D.A.M. Iero, L. Crocco, T. Isernia, "Advances in 3D Electromagnetic Focusing: Optimized Time Reversal and Optimal Constrained Power Focusing, *Radio Science*, vol. 52, n.1, pp. 166-175, 2017
  - Palmeri R, Bevacqua M, Crocco L, Isernia T, Di Donato L 'Microwave Imaging via Distorted Iterated Virtual Experiments. *IEEE Transactions on Antennas and Propagation*, vol. 65, n. 2, pp. 829-838, 2017
  - A.R. Laganà, A.F. Morabito, Isernia T 'Phase Retrieval by Constrained Power Inflation and Signum Flipping'. *Radio Science*, ISSN: 0048-6604, vol. 51 n. 12, pp. 1855-1863, Dec. 2016
  - L. Di Donato, R. Palmeri, G. Sorbello, Isernia T, L. Crocco 'A New Linear Distorted Wave Inversion Method for Microwave Imaging via Virtual Experiments' *IEEE Transactions on Microwave Theory and Techniques*, vol. 64, p. 2478-2488, (2016) ISSN: 0018-9480, doi: 10.1109/TMTT.2016.2584604
  - Crocco L, Di Donato L, Catapano I, Isernia T. 'The factorization method for virtual experiments based quantitative inverse scattering. *Progress in Electromagnetic Research (PIER)* vol. 157 pp. 121-131 (2016) ISSN: 1559-8985
  - T. Isernia, A.F. Morabito "Mask constrained power synthesis of linear arrays with even excitations" *IEEE Trans. on Antennas and Propagation*, vol. 64, p. 3212-3217, (2016) ISSN: 0018-926X, doi: 10.1109/TAP.2016.2556712
  - G. Torrisi, D. Mascali, L. Neri, O. Leonardi, G. Sorbello, L. Celona, G. Castro, R. I. Agnello, A. Caruso, S. Passarello, A. Longhitano, T. Isernia, S. Gammino, (2016) ' Microwave frequency sweep interferometer for plasma density measurements in ECR ion sources : Design and preliminary results', *Review of Scientific Instruments*, vol. 87, <http://dx.doi.org/10.1063/1.4933025>
  - A.F. Morabito, R. Palmeri, T. Isernia "A compressive sensing inspired procedure for array antennas diagnostics by a small number of phaseless measurements" *IEEE Trans. on Antennas and Propagation*, vol. 64, p. 3260-3265, (2016) ISSN: 0018-926X, doi: 10.1109/TAP.2016.2562669
  - M. Bevacqua, L. Crocco, L. Di Donato, T. Isernia, R. Palmeri 'Exploiting sparsity and field conditioning in sub-surface microwave imaging of non-weak targets', *Radio Science*, vol. 51, p. 301-310, (2016) ISSN: 0048-6604, doi: 10.1002/2015RS005904
  - G. Castorina, L. Di Donato, G. Sorbello, A. Morabito, Isernia T. 'Analysis and Design of a Concrete Embedded Antenna for Wireless Monitoring Applications', *IEEE Antennas & Propagation Magazine*, vol. 58, n. 6, pp. 76-93, December 2016
  - Iero D.A.M., Crocco L., Isernia T. (2016) 'On the role and choice of source polarization in time reversal focusing of vector fields', *IEEE Antennas and Wireless Propagation Letters*, vol. 15, pp. 214-217, 2016
  - M. Bevacqua, L. Crocco, L. Di Donato, Isernia T (2015). 'An Algebraic Solution Method for Non-Linear Inverse Scattering', *IEEE Trans. on Antennas and Propagation*, vol. 63, p. 601-610, 2015. See also 'Corrections to An algebraic solution method for non linear inverse scattering', vol. 64, n. 9, page 4155, 2016
  - Di Donato L., Palmeri R., Sorbello G., Isernia T, Crocco L. (2015). 'Assessing the Capabilities of a New Linear Inversion Method for Quantitative Microwave Imaging' *Int. Journal of Antennas and Propagation*, 501, 403760 (2015)
  - D.A.M. Iero, L. Crocco, Isernia T (2015). Constrained Power Focusing of Vector Fields: an Innovative Globally Optimal Strategy. *Journal of Electromagnetic Waves and Applications*, vol. 29, p. 1708-1719.
  - Di Donato L., Bevacqua M., Crocco L., Isernia T (2015). 'Inverse Scattering via Virtual Experiments and Contrast Source Regularization', *IEEE Transactions on Antennas and Propagation*, vol. 63, p. 1669-1677.
  - A.F. Morabito, A.R. Laganà, L. Sorbello, Isernia T (2015) 'Mask-Constrained Power Synthesis of Maximally-Sparse Linear Arrays through a Compressive-Sensing-Driven Strategy'. *Journal of*

- Electromagnetic Waves and Applications*, vol. 29, p. 1384-1396.
- M. Bevacqua, L. Crocco, L. Di Donato, Isernia T (2015) 'Microwave Imaging of Non Weak Targets via Compressive Sensing and Virtual Experiments', *IEEE Antennas and Wireless Propagation Letters*, vol. 14, p. 1035-1038.
  - A.F. Morabito, A.R. Laganà, Isernia T (2015), 'Optimizing Power Transmission in Given Target Areas in the Presence of Protection Requirement' *IEEE Antennas and Wireless Propagation Letters*, vol. 14, p. 44-47, ISSN: 1536-1225.
  - O.M. Bucci, A.F. Morabito, Isernia T (2014) 'Optimal Synthesis of Circularly Symmetric Shaped Beams', *IEEE Trans. on Antennas and Propagation*, vol. 62, p. 169-175.
  - O. Leonardi, M. G. Pavone, G. Sorbello, A. F. Morabito, Isernia T. (2014) 'Compact single-layer circularly polarized antenna for short-range communication systems'. *Microwave and Optical Technology Letters*, vol. 56, p. 1843-1846.
  - G. Torrisi, D. Mascali, G. Sorbello, L. Neri, L. Celona, G. Castro, Isernia T, S. Gammino (2014) 'Full-wave FEM simulations of electromagnetic waves in strongly magnetized non-homogeneous plasma', *Journal of Electromagnetic Waves and Applications*, vol. 28, p. 1085-1099.
  - Bucci O.M., Isernia T, Perna S, Pinchera D (2014), 'Isophoric Sparse Arrays Ensuring Global Coverage in Satellite Communications', *IEEE Trans. on Antennas and Propagation*, vol. 62, p. 1607-1618.
  - Iero D.A.M., Crocco L., Isernia T (2014) 'Thermal and microwave constrained focusing for patient-specific breast cancer hyperthermia: a robustness assessment', *IEEE Trans. on Antennas and Propagation*, vol. 62, p. 814-821.
  - G. Angiulli, D De Carlo, Isernia T (2013) 'A sensitivity study for microwave breast cancer detection using the Contrast-Source Integral Equation and realistic anthropomorphic numerical 3-D phantoms'. *Journal of Applied Electromagnetics and Mechanics*, vol. 43, p. 207-214.
  - Bucci O.M., Isernia T, Morabito A.F. (2013) 'An effective deterministic procedure for the synthesis of shaped beams by means of uniform amplitude linear sparse arrays' *IEEE Trans. on Antennas and Propagation*, vol. 61, p. 169-175.
  - Catapano I, Crocco L, Di Donato L, Isernia T (2013) 'An improved simple method for imaging the shape of complex targets', *IEEE Trans. on Antennas and Propagation*, vol. 61, p. 843-851.
  - Iero D.A.M., Isernia T., Crocco L. (2013) 'Focusing Time Harmonic Scalar Fields in Non-Homogenous Lossy Media: Inverse Filter vs. Constrained Power Focusing Optimization' *Applied Physics Letters*, vol. 103.
  - Iero D.A.M., Isernia T., Crocco L (2013) 'Focusing Time-Harmonic Scalar Fields in Complex Scenarios: A Comparison' *IEEE Antennas and Wireless Propagation Letters*, vol. 12, p. 1029-1032.
  - Morabito AF, Laganà A, Isernia T (2013) 'Isophoric antennas with a low number of control points: a size tapered solution' *Progress In Electromagnetics Research Letters*, vol. 36, p. 121-131.
  - A.R. Laganà, M.T. Bevacqua, Isernia T (2013) 'Modeling and Processing L-Band Ground Based Radar Data for Landslides Early Warning' *Journal of Electrical and Computer Engineering*, vol. 2013, 804615.
  - Leonardi O., Pavone M., Cadili T., Sorbello G., Isernia T (2013) 'Monolithic patch antenna for dedicated short-range communications' *Electronics Letters*, vol. 49, p. 85-86.
  - Isernia T, Laganà AR, Iero D.A.M., Morabito A.F., Carlström A, and Toso G (2013) 'Optimization of the Array Element Layout for a Rotating Imaging Interferometer', *IEEE Trans. on Antennas and Propagation*, vol. 61, p. 5057-5067.
  - Crocco L, Di Donato L, Iero D.A.M., Isernia T (2012) 'A new strategy for constrained focusing in

- unknown scenarios' *IEEE Antennas and Wireless Propagation Letters*, vol. 11, p. 1450-1453.
- Di Donato L, Scapaticci R, Isernia T, Catapano I, Crocco L (2012) 'An effective method for borehole electromagnetic imaging of buried tunnels' *International Journal of Antennas and Propagation*, vol. Article ID 246472.
  - Morabito A.F., Massa A., Rocca P., Isernia T (2012) 'An Effective Approach to the Synthesis of Phase-Only Reconfigurable Linear Arrays' *IEEE Trans. on Antennas and Propagation*, vol. 60.
  - Crocco L., Di Donato L., Iero D.A.M., Isernia T (2012) 'An adaptive method to focusing in an unknown scenario. *Electromagnetic Waves*', vol. 130, p. 563-579.
  - Angiulli G., De Carlo D., Isernia T (2012) 'Matching fluid influence on field scattered from breast tumour: analysis using 3D realistic numerical phantoms' *Electronics Letters*, vol. 48, p. 13-14.
  - Morabito AF, Isernia T, Di Donato L (2012) 'Optimal Synthesis of Phase-Only Reconfigurable Linear Sparse Arrays Having Uniform-Amplitude Excitations' *Electromagnetic Waves*, vol. 124, p. 405-423.
  - Crocco L, Catapano I, Di Donato L, Isernia T (2012) 'The Linear Sampling Method As A Way To Quantitative Inverse Scattering' *IEEE Trans. on Antennas and Propagation*, vol. 60, p. 1844-1853.
  - Attardo E, Isernia T, Vecchi G (2011) 'Field Synthesis in Inhomogeneous Media: Joint Control of Polarization, Uniformity and SAR in MRI B1-Field' doi:10.2528/PIER11051910. *Electromagnetic Waves*, vol. 118, p. 355-377.
  - Autieri R, D'Urso M, Isernia T, Pascazio V (2011). Inverse Profiling via an Effective Linearized Scattering Model and MRF Regularization. *IEEE Geoscience and Remote Sensing Letters*, vol. 8, p. 1021-1025.
  - Angiulli G., Isernia T., Tringali S. (2011) 'Modeling Realistic Contrast Maps from MRI Images for Microwave Breast Cancer Detection' *IEEE Antennas & Propagation Magazine*, vol. 53, p. 113-122.
  - O.M. Bucci, Isernia T, A.F. Morabito (2010) 'A deterministic approach to the synthesis of pencil beams through planar thinned arrays' *Electromagnetic Waves*, vol. 101, p. 217-230.
  - Catapano I, Crocco L, Isernia T (2010) 'A feasibility study of a quantitative microwave tomography technique for structural monitoring' *Near Surface Geophysics*.
  - O.M. Bucci, M. Durso, Isernia T, P. Angeletti, G. Toso (2010) 'Deterministic Synthesis of Uniform Amplitude Sparse Arrays via new Density Taper techniques' *IEEE Trans. on Antennas and Propagation*, vol. 58, p. 1949-1958.
  - M. D'Urso, Isernia T, A.F. Morabito (2010). On the Solution of 2D Inverse Scattering Problems via Source Type Integral Equations. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 48, p. 1186-1198.
  - A.F. Morabito, A.R. Laganà, Isernia T (2010). On the optimal synthesis of ring symmetric shaped patterns by means of uniformly spaced planar arrays. *Progress In Electromagnetics Research B*, Vol. 20, pp. 33-48.
  - D. Iero, Isernia T, A.F. Morabito, I. Catapano, L. Crocco (2010) 'Optimal constrained field focusing for hyperthermia cancer therapy: a feasibility assessment on realistic phantoms' *Electromagnetic Waves (Pier)*, vol. 102, p. 125-141.
  - Catapano I, Crocco L, Isernia T (2010) 'Quantitative imaging from diffracted field intensities: an inversion method and its experimental validation', *Journal of Modern Optics*, vol. 57, n. 9, pp. 777-782.
  - M. D'Urso, Isernia T, A.F. Morabito (2010) 'Synthesis of difference patterns via uniform amplitude sparse arrays' *Electronic Letters*, vol. 46, p. 554-556.
  - Catapano I, Crocco L, D'urso M, Isernia T (2009) '3D Microwave Imaging via preliminary support reconstruction: testing on the Fresnel 2008 database' *Inverse Problems*, vol. 25, n.4.

- Isernia T, D'Urso M, Bucci O.M (2009) 'A simple idea for an effective sub-arraying of large planar arrays' *IEEE Antennas and Wireless Propagation Letters*, vol. 8.
- A.F. Morabito, Isernia T, M.G. Labate, M. D'Urso, O.M. Bucci (2009). Direct Radiating Arrays for Satellite Communications via Aperiodic Tilings' *Electromagnetic Waves (Pier)*, vol. 93, p. 107-124.
- I. Catapano, L. Di Donato, L. Crocco, O. M. Bucci, A. F. Morabito, Isernia T, R. Massa (2009) 'On quantitative microwave tomography of female breast' *Electromagnetic Waves (Pier)*, vol. 97, p. 75-93.
- Bucci O.M, Isernia T, Morabito A.F (2009). Optimal Synthesis of Directivity Constrained Pencil Beams by Means of Circularly Symmetric Aperture Fields. *IEEE Antennas and Wireless Propagation Letters*, vol. 8, p. 1386-1389.
- L. Crocco, M. Durso, Isernia T (2009). The Contrast Source Extended Born model for 2D subsurface scattering problems. *Progress in Electromagnetics Research B*, vol. 17, p. 343-359.
- Catapano I, Crocco L, Isernia T (2008). Improved Sampling Methods for shape reconstruction of 3D buried targets. *IEEE Transactions on Geoscience and Remote Sensing* vol. 46, p. 3265-3273.
- I. Catapano, L. Crocco, Isernia T (2008). Linear sampling method: physical interpretation and guidelines for a successful application. *PIERS online*, vol. 4, n.2, p. 291-295.
- D'Urso M, Belkebir K, Crocco L, Isernia T, Litman A (2008) 'Phaseless imaging with experimental data: facts and challenges' *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, vol. 25, p. 271-281.
- Bucci O.M, D'urso M, Isernia T (2008). Some Facts and Challenges in Array Antenna Synthesis Problems. *Automatika*, vol. 49, n.1, p. 13-20.
- Catapano I, Crocco L, D'urso M, Isernia T (2008). Some recent advancements in microwave tomography. *Proceedings of the European Microwave Association*, vol. 4 n.1, p. 40-48.
- D'Urso M, Isernia T, Meliado' F (2007). An effective hybrid approach for the optimal synthesis of monopulse antennas', *IEEE Trans. on Antennas and Propagation* vol. 55, p. 1059-1066.
- Catapano I, Crocco L, D'urso M, Isernia T (2007). Effective solution of 3D scattering problems via series expansions: applicability and a new hybrid scheme. *IEEE Transactions on Geoscience and Remote Sensing* vol. 45, p. 639-648.
- Crocco L, D'Urso M, Isernia T (2007). Faithful non-linear imaging from only-amplitude measurements of incident and total fields. *Optics Express*, vol. 15 n.7, p. 3804-3815.
- Crocco L, Cuomo F, Isernia T (2007). Generalized scattering-matrix method for the analysis of two-dimensional photonic bandgap devices. *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, vol. 24 n.10, p. A12-A22.
- Catapano I, Crocco L, Isernia T (2007). 'On Simple Methods for Shape Reconstruction of Unknown Scatterers', *IEEE Trans. on Antennas and Propagation* vol. 55, p. 1431-1436.
- Catapano, I, Crocco, L, D'Urso, M, Isernia T (2007). On the Effect of Support Estimation and of a New Model in 2-D Inverse Scattering Problems. *IEEE Trans. on Antennas and Propagation*, vol. 55, p. 1895-1899.
- D'Urso M, Isernia T (2007). Solving some array synthesis problems by means of an effective hybrid approach. *IEEE Trans. on Antennas and Propagation*, vol. 55, p. 750-759.
- Catapano I, Crocco L, D'Urso M, Isernia T (2006). A novel effective model for solving 3D inverse scattering problems in lossy scenarios. *IEEE Geoscience and Remote Sensing Letters*, vol. 3, p. 302-306.
- Crocco L, F. Cuomo F, Isernia T (2006). An Improved Scattering Matrix Method for the Analysis of Two-dimensional PBG Devices', *Microwave and Optical Technology Letters*, vol. 48, p. 2564-2570.

- Bucci O.M, Crocco L, D'Urso M, Isernia T (2006). Inverse Scattering From Phaseless Measurements of The Total Field on Open Lines' *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, vol. 23, n.10, p. 2566-2577.
- O.M. Bucci, M. D'Urso, Isernia T (2005). Optimal synthesis of difference patterns subject to arbitrary sidelobe bounds by using arbitrary array antennas. *IEE Proceedings. Microwaves, Antennas and Propagation*, vol. 152, p. 129-137.
- O.M. Bucci, I. Catapano, L. Crocco, Isernia T (2005). Synthesis of new variable dielectric profile antennas via inverse scattering techniques: a feasibility study' *IEEE Trans. on Antennas and Propagation*, vol. 53, p. 1287-1297.
- L. Crocco, M. D'Urso, Isernia T (2005). Testing the contrast source Extended Born method against real data: the case of TM data. *Inverse Problems*, Vol. 21, n. 6.
- Isernia T, Pena F.J.A., Bucci O.M., D'Urso M., Gomez J.F., Rodriguez J.A. (2004). 'A hybrid approach for the optimal synthesis of pencil beams through array antennas' *IEEE Trans. on Antennas and Propagation*, vol. 52, p. 2912-2918.
- Catapano, L. Crocco, Isernia T (2004) 'A simple two-dimensional inversion technique for imaging homogeneous targets in stratified media' *Radio Science*, vol. 39.
- L. Crocco, M. D'Urso, Isernia T (2004). Inverse scattering from phaseless measurement of the total field on closed curves. *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, vol. 21, pp. 622-631.
- Isernia T, L. Crocco, M. D'Urso (2004). New tools and series for forward and inverse scattering problems in lossy media. *IEEE Transactions on Geoscience and Remote Sensing*, Vol. 1, P. 327-331.
- Isernia T, O.M. Bucci, L. Caccavale (2002). Optimal far field focusing of uniformly spaced arrays subject to arbitrary upper bounds in non-target directions *IEEE Trans. on Antennas and Propagation*, vol. 50, p. 1539-1554.
- Bucci O. M., Cardace N., Crocco L., Isernia T (2001). Degree of Non-Linearity And A New Solution Procedure In Scalar 2-D Inverse Scattering Problems' *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, vol. 18, p. 1832-1843.
- L. Crocco, T. Isernia, Isernia T (2001). 'Inverse scattering with real data: detecting and imaging homogeneous dielectric objects' *Inverse Problems*, vol. 17, p. 1573-1584.
- Isernia T, Pascazio V., R. Pierri (2001). On the local minima in a tomographic imaging technique. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 39, p. 1596-1607.
- Isernia T, Bucci O. M., Crocco L., Pascazio V. (2001). Sub-surface inverse scattering problems: quantifying and achieving the available the available information. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 39, p. 2527-2538. See also Bucci O.M., Crocco L, Isernia T, Pascazio V (2002). See also correction to "Subsurface Inverse scattering problems: quantifying, qualifying and achieving the retrievable information. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 40, p. 728.
- Isernia T, P. Di Iorio, F. Soldovieri (2000). An effective approach for the optimal focusing of array Fields subject to arbitrary upper bounds. *IEEE Trans. on Antennas and Propagation*, vol. 48, p. 1837-1847.
- Isernia T, Bucci O. M., Crocco L., Pascazio V. (2000). Inverse scattering problems with multifrequency data: reconstruction capabilities and solution strategies *IEEE Transactions on Geoscience and Remote Sensing*, vol. 38, p. 1749-1756.
- Isernia T, L.Caccavale, F.Soldovieri (2000). Methods for the optimal focusing of microstrip array antennas including mutual coupling. *IEE Proceedings. Microwaves, Antennas and Propagation*, vol. 147, p. 199-202.
- O.M. Bucci, L. Crocco, Isernia T (1999). Improving the reconstruction capabilities in inverse scattering

- problems by exploiting "near proximity" setups. *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, vol. 16, p. 1788-1798.
- Isernia T, F. Soldovieri, G. Leone, R. Pierri (1999). Role of support information and zero locations in phase retrieval by a quadratic approach. *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, vol. 16, p. 1845-1856.
  - Isernia T, G. Panariello (1998) 'Optimal Focusing of scalar fields subject to arbitrary upper bounds' *Electronic Letters*, vol. 34, p. 162-164.
  - Isernia T., Bucci O.M., Fiorentino N. (1998). Shaped beam antenna synthesis problems: Feasibility criteria and new strategies. *Journal of Electromagnetic Waves and Applications*, vol. 12, p. 103-138.
  - Isernia T, V. Pascazio, R. Pierri (1997). A Non-Linear Estimation Method in Tomographic Imaging. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 35, p. 910-923.
  - O.M. Bucci, Isernia T. (1997) 'Electromagnetic Inverse Scattering: Retrievable Information and Measurement Strategies' *Radio Science*, vol. 32, N.6, p. 2123-2138.
  - Isernia T, V. Pascazio, R. Pierri, G. Schirinzi (1996). Image restoration from Fourier transform magnitude with application to SAR imaging. *Journal of the Optical Society of America A, Optics, Image Science, and Vision*, p. 922-934.
  - Isernia T, G. Leone, R. Pierri, F. Soldovieri (1996) 'On the local minima in phase reconstruction algorithms' *Radio Science*, p. 1887-1899.
  - Isernia T, G. Leone, R. Pierri (1996). Radiation pattern evaluation from near field intensities on planes. *IEEE Trans. on Antennas and Propagation*, vol. 44, p. 701-710.
  - Isernia T, V. Pascazio, R. Pierri, G. Schirinzi (1996). Synthetic aperture radar imaging from phase corrupted data. *IEE Proceedings on Radar, Sonar and Navigation*, vol. 143, p. 268-275.
  - Isernia T, G. Leone, R. Pierri (1996). Unique phase reconstruction of near fields over planes. *Optics Communications*, p. 131-142.
  - Isernia T, G. Leone, R. Pierri (1995). Numerical and experimental validation of a phaseless planar near field technique. *Journal of Electromagnetic Waves and Applications*, vol. 9, p. 267-284.
  - Isernia T, G. Leone, R. Pierri (1995). Phase retrieval of radiated fields. *Inverse Problems*, vol. 11, p. 183-203.
  - A. Cutolo, Isernia T, I. Izzo, R. Pierri, L. Zeni (1995). Transverse mode analysis of a laser beam by near and far field intensity measurements. *Applied Optics*, vol. 34, p. 7974-7978.
  - Isernia T, G. Leone, R. Pierri (1994). Phaseless near field techniques: formulation of the problem and field properties. *Journal of Electromagnetic Waves and Applications*, vol. 8, n.7, p. 867-888.
  - Isernia T, G. Leone, R. Pierri (1994) 'Phaseless near field techniques: uniqueness and attainment of the solution' *Journal of Electromagnetic Waves and Applications*, vol. 8, n. 7, p. 889-908.
  - Isernia T, Leone G, Pierri R, Soldovieri F. (1994) 'Reflector diagnostics from aperture and far field intensities' *Atti della Fondazione Giorgio Ronchi*, vol. 40, p. 727-731.
  - Isernia T, G. Leone, R. Pierri (1993). Antenna testing from phaseless measurements: probe compensation and experimental results in the cylindrical case. *IEE Proceedings. Part H, Microwaves, Antennas and Propagation*, vol. 140, p. 395-400.
  - Isernia T, G. Leone, R. Pierri (1993). Results for a truncated phaseless near field technique. *Electronic Letters*, vol. 29, p. 505-506.
  - Isernia T, G. Leone, R. Pierri (1992). A new approach to antenna testing with near field phaseless data : the cylindrical scanning. , *IEE Proceedings. Part H, Microwaves, Antennas and Propagation*, vol. 139, p. 363-368.

- A. Cutolo, A. Esposito, Isernia T, R. Pierri, L. Zeni (1992). Characterization of transverse modes of a laser beam: analysis and applications to a Q switched Nd:YAG laser. *Applied Optics*, vol. 31, n.15, p. 2722-2733.
- A. Cutolo, F. Ferreri, Isernia T, R. Pierri, L. Zeni (1992). Measurements of the waist and power distribution across the transverse modes of a laser beam. *Optical and Quantum Electronics*, vol. 24, n.9, p. S963-S971.
- Isernia T, G. Leone, R. Pierri (1991) 'New technique for estimation of far field from near zone phaseless data' *Electronic Letters*, vol. 27, p. 652-654.

#### Presentazioni e Seminari

T. Isernia ha tenuto seminari ad invito presso diverse Università Italiane e straniere.

Ha tenuto presentazioni estese come Invited speaker in diversi Convegni Internazionali tra cui:

2018 'Metamaterials', Aalto,  
2017 Progress in Electromagnetic Research Symposium, Singapore  
2016 OSA ..... Heidelberg  
2016 Metamaterials by design Riva del Garda

Ha organizzato (con G. Vecchi, S. Maci) la prima Scuola Internazionale per dottorandi in Elettromagnetismo (Capri 2001)

E' stato co-organizzatore e speaker di diverse Scuole Internazionali per dottorandi svolte in ambito ESoA (European School of Antennas), aventi ad oggetto :

'Antenna Synthesis' (cinque diverse edizioni, Napoli o Capri, co-organizzatore delle prime edizioni);  
'Microwave Imaging and Diagnostics (tre diverse Edizioni, Madonna di Campiglio o Taormina, co-organizzatore'  
'Compressive sensing as applied to Electromagnetics' (Pechino, co-organizzatore)

#### Responsabilità di Progetti

Oltre che di alcuni progetti regionali, e di azioni a sostegno della mobilità (progetti integrati Italia-Spagna, Progetti 'Galileo Italia-Francia) Tommaso Isernia è stato (o è) responsabile dei seguenti progetti :

- PRIN 2007 (resp. locale, finanziamento MIUR) ;
- Radar Implementation of Compressive Sensing (finanziato dalla Agenzia Europea per la Difesa, responsabile scientifico);
- New Architectures for Multi-Beam Antennas (due diversi progetti finanziati dalla Agenzia Spaziale Europea, Principal Investigator assieme a O.M. Bucci);
- PRIN 2014 'Field and Temperature Shaping for microwave Hyperthermia (FAT-Sammy), responsabile nazionale, finanziamento MIUR

#### Riconoscimenti e premi

Premio Barzilai della Società Italiana di Elettromagnetismo destinata a giovani ricercatori nel 1994. In seguito il premio è stato conseguito da sei dottorandi seguiti dal Prof. Isernia (D'Urso e Crocco, Laganà e Morabito, Bevacqua e Scapaticci);  
Best paper Award al XXX Workshop ESA (European Space Agency) on Space Antennas.

#### Appartenenza a gruppi / associazioni

Tommaso Isernia è membro della Società Italiana di Elettromagnetismo (SIEM), Senior Member della IEEE, nonché Fellow della 'Electromagnetics Academy'

#### Dati personali

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

m