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personal and academic data

Date of birth	23 may 1968
place of birth	Catania
Citizenship	Italian
Academic qualifications	<i>Ph. D. in Physics</i> (1996) Università degli Studi di Catania <i>Master degree in Mathematics</i> (1999) University of Catania Catania <i>Master degree in Physics</i> (1992) University of Catania

Job Positions

02.2018– today	Associate Professor, University of Catania, Catania
10.2001– 02.2018	Assistant Professor, University Catania, Catania

Research Topics

Variational Inequalities in probabilistic Lebesgue spaces

Duality Theory

Nash equilibrium problems

Inverse problems

Network Games

Research experience abroad

Various research periods at : University of the Armed Forces of Munich, Rochester Institute of Technology (NY), Poincaré Institute (Paris), Universities of Alicante and Barcelona.

Selected papers

- F. Raciti et al.: *Spin and electron structure*, Phys.Lett. **B**, 318, (1993) 481-488.
- F. Raciti and G. Salesi: *Complex barrier tunneling times*, Journal de Physique, France, **4** (1994), 1783-1789.
- A. Khan and F. Raciti *A multiplier Rule in Set-Valued Optimization* , "Bulletin of the Australian Mathematical Society, vol. 68, pp. 93-100, 2003
- J. Gwinner and F. Raciti, *On a class of Random Variational Inequalities on Random Sets* , Numerical Functional Analysis and Optimization, **27**, 5-6, pp. 619-636, 2006.
- B. Jadamba, A.A. Khan, F. Raciti, *On the inverse problem of identifying Lamé coefficients in linear elasticity*, Computer and Mathematics with Applications, **56**, 431–443, 2008.
- A. Maugeri, F. Raciti, *On General Infinite Dimensional Complementarity Problems*, Optimization Letters, Vol.2, n.1, Jan., pp. 71-90, 2008.
- F. Raciti, *Equilibrium Conditions and Vector Variational Inequalities: a Complex Relation*, Journal of Global Optimization, Vol. 40, pp. 353–360, 2008.
- A. Maugeri, F. Raciti, *On Existence Theorems for Monotone and Nonmonotone Variational Inequalities*, Journal of Convex Analysis, Vol.16, n.3&4, pp. 899-911, 2009.
- B. Jadamba, A.A. Khan, F. Raciti, *Regularization of Stochastic Variational Inequalities and a Comparison of an L_p and a Sample-Path Approach*, Nonlinear Analysis, vol. **94**, pp. 65-83 2014.
- F. Faraci, F. Raciti, *On generalized Nash equilibrium in infinite dimension: the Lagrange multipliers approach*, Optimization **64**, pp. 321–338, 2015, doi: 10.1080/02331934.2012.747090.
- B. Jadamba, F. Raciti, *Variational Inequality Approach to Stochastic Nash Equilibrium Problems with an Application to Cournot Oligopoly*, Journal of Optimization Theory and applications **165**, pp. 1050-1070, 2015, DOI 10.1007/s10957-014-0673-9.
- A. Gibali, B. Jadamba, A. A. Khan, F. Raciti, and B. Winkler *Gradient and Extragradient Methods for the Elasticity Imaging Inverse Problem Using an Equation Error Formulation: A Comparative Numerical Study*, Contemporary Mathematics, vol. **659**, p. 65-89, , 2016.
- G. Di Fazio, E. Francini, F. Raciti, S. Vessella, *Stable determination of a Lamé coefficient by one internal measurement of displacement*, Journal of Mathematical Analysis and Applications, **45**, pp. 388–400, 2017, <http://dx.doi.org/10.1016/j.jmaa.2017.03.013>
- B. Jadamba, M. Pappalardo, F. Raciti *Efficiency and vulnerability analysis for congested networks with random data*, J. Optim. Theory Appl (2018) 177:563-583 <https://doi.org/10.1007/s10957-018-1264-y>
- M. Pappalardo, M. Passacantando, F. Raciti, *A stochastic network equilibrium model for electric power markets with uncertain demand*, Optimization, vol. 69 (7-8), pp. 1703-1730, doi: 10.1080/02331934.2019.1671383, 2020
- M. Passacantando, F. Raciti, *Optimal road maintenance investment in traffic networks with random demands*, Optimization Letters, 15, pp. 1799–1819, 2021 <https://doi.org/10.1007/s11590-019-01493-y>,
- G. Mastroeni, M. Pappalardo, F. Raciti, *Generalized Nash equilibrium problems and variational inequalities in Lebesgue spaces*, Minimax Theory and its Applications, **5**, pp. 47–64, (2020)
- M. Passacantando, F. Raciti, *On the approximation of monotone variational inequalities in L^p spaces with probability measure*, book chapter in: Nonlinear Analysis and Global Optimization, ed. by Panos M. Pardalos and Themistocles Rassias, Springer-Optimization and its applications, **167**, Springer Nature, Switzerland, AG2021, pp-403–425 (2021).

- M. Passacantando, F. Raciti: *A note on generalized Nash games played on networks*, in: *Nonlinear Analysis, Differential Equations, and Applications*, T.M. Rassias (ed.), Springer Optimization and Its Applications, vol. 173, Springer, Cham, pp. 365-380 (2021).
 - M. Passacantando, F. Raciti, *A performance measure analysis for traffic networks with random data and general monotone cost functions*, 71, pp. 2375-2401, 2022
 - Baasansuren Jadamba, A.A. Khan, F. Raciti, Miguel Sama: *A variational inequality based stochastic approximation approach for estimating the flexural rigidity in fourth-order models with random data*, *Communications in Nonlinear Science and Numerical Simulation* Volume 111, 106406, (2022)
 - M. Passacantando, F. Raciti: *A Variational Inequality Approach to a Class of Network Games with Local Complementarities and Global Congestion*. In: Amorosi, L., Dell'Olmo, P., Lari, I. (eds) *Optimization in Artificial Intelligence and Data Sciences*. AIRO Springer Series, vol 8. Springer, Cham. (2022)
 - M. Passacantando, F. Raciti, A. Nagurney *International migrant flows: Coalition formation among countries and social welfare*, submitted for the publication.
 - M. Passacantando, F. Raciti *A finite convergence algorithm for solving network games with strategic complements and bounded strategies*, submitted for the publication.
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Books

- A. Giacobbe, M. Fanciullo, F. Raciti, *Esercizi di Analisi Matematica 2*, Medical Books, Palermo, ISBN 88-8434-006-9, 2013. (Calculus book)
- Joachim Gwinner, Baasansuren Jadamba, Akhtar A. Khan, Fabio Raciti: *Uncertainty Quantification in Variational Inequalities: Theory, Numerics, and Applications*, ISBN 9781138626324, Chapman and Hall/CRC, 2021 (Research monograph)