

## **ACHILLE BASILE**

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**Date of birth:** January 21<sup>st</sup>, 1958

### **Education**

**1981 – 1983:** Higher education in Mathematics, National Institute for Advanced Mathematics "F. Severi" (INdAM), Rome

**1976 – 1981:** Laurea (Mathematics, summa cum laude), University Federico II

### **Positions and Professional Activities**

**2013 – present:** Full Professor of Mathematical Methods for Economics, University Federico II

**1994 - 2012:** Full Professor of Mathematical Methods for Economics, Faculty of Economics, University Federico II

**1987 – 1994:** Associate Professor of Mathematical Methods for Economics, Faculty of Economics, University Federico II

**1984 – 1987:** Assistant Professor of Mathematical Analysis, Faculty of Sciences, University Federico II

**2001 - 2006:** Vice President of the *Division of Human and Social Sciences* of University Federico II, Naples

**2005 – 2012:** Dean of the Faculty of Economics, University Federico II, Naples

**1997-2005:** Director of the Ph. D. program in Mathematics for Economic Analysis and Finance, University Federico II, Naples

**2013 – 2018:** Nucleo di Valutazione of University of Bologna, member.

**2013 – 2015:** Presidio della Qualità of University of Naples Federico II, coordinator.

**2016 – 2024:** Nucleo di Valutazione of University of Naples Federico II, president.

**2019 – 2024:** Nucleo di Valutazione of University of Messina, president.

### **Scientific interests**

Functional Analysis, Measure Theory, Game Theory, General Equilibrium Theory, Public Economic Theory.

Quality in higher education and research.

### **Organization of Conferences/Workshops/Summer Schools**

SUMMER SCHOOLS: *FOUNDATIONS AND ADVANCEMENTS OF MATHEMATICAL ECONOMICS*,  
POZZUOLI, AIR FORCE ACADEMY  
*CHAIR: 1998-1999-2000-2001-2003*

*C.A.R.Te.Mi, Meeting of Real Analysis and Measure Theory*  
Member of the Organizing and Scientific Committee:  
1986-1988-1990-1992-1994-1996-1998-2000-2002-2004-2006

*Annual Conference of the Association for Mathematics Applied to Economic and Social Sciences (AMASES)*  
Member of the Organizing and Scientific Committee:1993  
Chair: 2024

*Conference of the Society for the Advancement of Economic Theory*  
Member of the Organizing and Scientific Committee:  
1993-1995-1999-2003-2005-2007-2011-2013-2015-2017  
Chair: 2001; co-Chair: 2009-2019-2025

*European Workshop in General Equilibrium Theory*  
Member of the Scientific Committee:2015, 2016, 2017, 2018  
Member of the Organizing Committee:2015

*European Workshop in Economic Theory*  
Member of the Scientific Committee:2019-2021-2022-2023  
Member of the Organizing Committee:2013

*Workshop on Equilibrium Analysis*  
Member of the Organizing Committee:2010, 2011, 2012, 2013, 2014, 2018

*Workshop on Games, Markets and Ambiguity*  
Member of the Organizing Committee:2015

### **Awards**

1991 Academic Prize for Mathematical Sciences, *SOCIETÀ NAZIONALE DI SCIENZE LETTERE ED ARTI IN NAPOLI*.

2011 Guido Dorso Prize for University, *ASSOCIAZIONE INTERNAZIONALE GUIDO DORSO*, ROMA.

2015 Anassilaos Prize for Mathematics, *REGGIO CALABRIA*.

### **Professional Societies**

- *Italian Association for Mathematics Applied to Economic and Social Sciences (AMASES)*  
1996-2000, member of Scientific Committee  
2000-2005, General Secretary  
2011- 2016, President
- *ITALIAN MATHEMATICAL UNION (UMI)*
- *AMERICAN MATHEMATICAL SOCIETY*
- *SOCIETY FOR THE ADVANCEMENT OF ECONOMIC THEORY*

### **Fellowships**

**2008** FULL FELLOW OF *ACCADEMIA DI SCIENZE FISICHE E MATEMATICHE, SOCIETÀ NAZIONALE DI SCIENZE LETTERE ED ARTI IN NAPOLI*

**2020** ECONOMIC THEORY FELLOW OF THE *SOCIETY FOR THE ADVANCEMENT OF ECONOMIC THEORY*

### **Editorial activities**

**2000-2009**, Editorial board of *Lecture Notes in Economics and Mathematical Systems*, Springer-Verlag,

ISSN: 0075-8442

**2010-2016**, Scientific Committee of *Decisions in Economics and Finance*,

ISSN: 1593-8883

**2017- present**, *Economics Bulletin*, Associate Editor, ISSN 1545-2921

## **PUBLICATIONS**

*Isotone Classes of Social Choice Functions with Binary Range*, **Games** 2024,15,43. [https://doi.org/ 10.3390/g15060043](https://doi.org/10.3390/g15060043) (joint K.P.S. Bhaskara Rao, Anna De Simone and CiroTarantino)

*The character of non-manipulable collective choices between two alternatives*, **ArXiv 2208.01594**, 2022; **Social Choice and Welfare**, 2024, <https://doi.org/10.1007/s00355-024-01546-x> (joint with Surekha Rao and K.P.S. Bhaskara Rao)

*A Note on Binary Strategy-Proof Social Choice functions*, **Games** 2022, 13(6),78; <https://doi.org/10.3390/g13060078> (joint with Anna De Simone and Ciro Tarantino)

*Preference Reversal and Strategy-Proofness with more than three alternatives*, **Economics Letters**, N. 208, 2021, DOI: <https://doi.org/10.1016/j.econlet.2021.110083> (joint with K.P.S. Bhaskara Rao and Surekha Rao)

*On the relation between Preference Reversal and Strategy-Proofness*, **Economics Letters**, N. 206, 2021, DOI: <https://doi.org/10.1016/j.econlet.2021.109992> (joint with K.P.S. Bhaskara Rao and Surekha Rao)

*Non-emptiness of the alpha-core: sufficient and necessary conditions*, **International Journal of Game Theory**, N. 49, 1143-1153, 2020 (joint with Vincenzo Scalzo)

*Geometry of anonymous binary social choices that are strategy-proof*, **ArXiv 2008.02041**, 2020; **Math. Social Sci.**, N. 116, 85-91, 2022, <https://doi.org/10.1016/j.mathsocsci.2022.01.001> (joint with Surekha Rao and K.P.S. Bhaskara Rao)

*Anonymous, non-manipulable, binary social choice*, **ArXiv 2007.01552**, 2020; **Games and Economic Behavior**, N. 133, 138-149, 2022, <https://doi.org/10.1016/j.geb.2022.02.007> (joint with Surekha Rao and K.P.S. Bhaskara Rao)

*Binary strategy-proof social choice functions with indifference*, **Economic Theory**, 73, 807-826, 2022, DOI: 10.1007/s00199-020-01273-1 (joint with Surekha Rao and K.P.S. Bhaskara Rao).

*The structure of two-valued coalitional strategy-proof social choice functions*, **ArXiv 2002.06341**, 2020; **Journal of Math. Economics**, N. 95, 2021, <https://doi.org/10.1016/j.jmateco.2021.102474> (joint with Surekha Rao and K.P.S. Bhaskara Rao).

*The Core of Economies with Collective Goods and a Social Division of Labor*, **Economic Theory**, 71, 1085-1119, 2021, <https://doi.org/10.1007/s00199-020-01258-0> (joint with Robert P. Gilles, Maria Gabriella Graziano and Marialaura Pesce).

*A new view on Arrovian dictatorship in a fuzzy setting*, **FUZZY SETS AND SYSTEMS**, N. 349, 99-106, 2018, DOI: [10.1016/j.fss.2018.02.002](https://doi.org/10.1016/j.fss.2018.02.002) (joint with Vincenzo Scalzo).

*On the ultrafilter representation of coalitionally strategy-proof social choice functions*, **Economic Theory Bulletin**, N. 6, 1-13, 2018, DOI: [10.1007/s40505-017-0129-0](https://doi.org/10.1007/s40505-017-0129-0) (joint with Surekha Rao and K.P.S. Bhaskara Rao).

*Cones with semi-interior points and equilibrium*, **CSEF Working Papers ISSN: 2240-9696**, N. 443, 2016; **Journal of Math. Economics**, 71, 36-48, 2017, doi: <http://doi.org/10.1016/j.jmateco.2017.03.002> (joint with Maria Gabriella Graziano, Maria Papadaki and Ioannis A. Polyrakis).

*Coalitional fairness with participation rates*, **CSEF Working Papers ISSN: 2240-9696**, N. 442, 2016; **Journal of Economics**, 123, 97-139, 2018, DOI: [10.1007/s00712-017-0543-7](https://doi.org/10.1007/s00712-017-0543-7) (joint with Maria Gabriella Graziano and Ciro Tarantino).

*Oligopoly and cost sharing in economies with public goods*, **International Economic Review**, N. 57, 487- 505, 2016 (joint with Maria Gabriella Graziano and Marialaura Pesce).

*Mixed Markets with Public Goods*, **CSEF Working Papers ISSN: 2240-9696**, N. 261, 2010 (joint with Maria Gabriella Graziano and Marialaura Pesce).

*On Fairness of Equilibria in Economies with Differential Information*, **Theory and Decision**, 76, 573-599, 2014 (joint with Maria Gabriella Graziano and Marialaura Pesce).

DOI [10.1007/s11238-013-9386-z](https://doi.org/10.1007/s11238-013-9386-z)

*Core Equivalences for Equilibria Supported by Non-linear Prices*, **Positivity**, 17, 621-653, 2013 (joint with Maria Gabriella Graziano), DOI: [10.1007/s11117-012-0195-3](https://doi.org/10.1007/s11117-012-0195-3) (published online August 31<sup>st</sup>, 2012 )

*Economies with informational asymmetries and limited vetoer coalitions*, **Economic Theory**, 45, 147-180, 2010 (joint with Chiara Donnini and Maria Gabriella Graziano) . doi:[10.1016/j.jmateco.2008.11.001](https://doi.org/10.1016/j.jmateco.2008.11.001)

*Core and equilibria in coalitional asymmetric information economies*, **Journal of Math. Economics** 45, 293-307, 2009 (joint with Chiara Donnini and Maria Gabriella Graziano).

*On the Aumann-Shapley value*, **Positivity** 12, 613-629, 2008 (joint with Camillo Costantini and Paolo Vitolo). DOI: [10.1007/s11117-008-2207-x](https://doi.org/10.1007/s11117-008-2207-x)

*Positive operators à la Aumann-Shapley on spaces of functions on D-lattices*, **Positivity** 10, 701-719, 2006, (joint with Anna Avallone and Paolo Vitolo). DOI: [10.1007/s11117-006-0052-3](https://doi.org/10.1007/s11117-006-0052-3)

*Coalitional economies with public projects*, **Social Choice and Welfare** 25, 127-139, 2005 (joint with Anna De Simone and Maria Gabriella Graziano). DOI: [10.1007/s00355-005-0038-2](https://doi.org/10.1007/s00355-005-0038-2)

*On a linearity theorem for measures*, **Scientiae Mathematicae Japonicae** 60, n.3, 487-500, 2004 (joint with Anna Avallone).

*On a Marinacci uniqueness theorem for measures*, **Journal of Mathematical Analysis and Applications** 286, 378-390, 2003 (joint with Anna Avallone).

*On the Edgeworth's conjecture in finitely additive economies with restricted coalitions*, **Journal of Math. Economics** 36, 219-240, 2001 (joint with Maria Gabriella Graziano).

*Chi ha detto che un Matematico non può vincere il Nobel?*, **Atti Terzo Convegno Matematica e Cultura**, Venezia 1999, Springer-Italia (joint with Marco Li Calzi).

*Economisti e matematica, dal 1494 fino al 1969, oltre l'arte del far di conto*, **Atti Terzo Convegno Matematica e Cultura**, Venezia 1999, Springer-Italia (joint with Marco Li Calzi).

*Completeness of  $L_p$ -spaces in the finitely additive setting and related stories*, **Journal of Math. Anal. Appl.** 248, 588-624, 2000 (joint with K.P.S. Bhaskara Rao).

*On the Range of Additive Correspondences*, nel volume **Functional Analysis and Economic Theory**, Eds: Y. Abramovich, E. Avgerinos and N. C. Yannelis, Springer Verlag, Berlin, 1998, 47-60. ISBN 978-3-642-72222-6 (2012 reprint).

*Liapunov-Richter Theorem in B-convex Spaces*, **Journal of Mathematical Economics** 30, 109-118, 1998 , (joint with Anna Avallone)

*On a Unifying Approach to Decomposition Theorems of Yosida-Hewitt type*, **Annali di Matematica Pura e Applicata** 173, 107-125, 1997 (joint with A. V. Bukhvalov)

*On the Aubin-like Characterization of Competitive Equilibria in Infinite Dimensional Economies*, **Rivista di Matematica per le Scienze Economiche e Sociali** 19, 187-213, 1996 (joint with Anna De Simone and Maria Gabriella Graziano)

*On The Generalized Dictatorship of Arrovian Social Welfare Functions*, **Studi Economici**, 57, 35-51, 1995

*From Large Economies to Uniform Semigroup Valued Measures*, **Atti III Congresso "Dr. Monteiro" Bahia Blanca**, April 26-28 1995, 91-99, ISSN 0327-9170

*Equilibri di Nash per giochi non cooperativi*, **Atti III Congresso "Dr Monteiro" Bahia Blanca**, April 26-28 1995, 127-138, ISSN 0327-9170

*Bounded Common Extensions of Bounded Charges*, **Proceedings of American Mathematical Society** 121, May, 137-143, 1994, (joint with K.P.S. Bhaskara Rao and R.M. Shortt)

*Finitely Additive Correspondences*, **Proceedings of American Mathematical Society** 121, July, 883-891, 1994

*The Generalized Yosida-Hewitt Theorem*, **Mathematical Proceedings of Cambridge Philosophical Society** 116, 527-533, 1994 (joint with A.V. Bukhalov and M. Yakubson)

*Finitely Additive Nonatomic Coalition Production Economies: Core-walras Equivalence*, **International Economic Review** 34, 983-994, 1993

*On The Liapunov-richter Theorem in the Finitely Additive Setting*, **Journal of Mathematical Economics** 22, 557-561, 1993 (joint with Anna Avallone)

*Ricchezza di selezioni per multifunzioni di produzione*, **Atti XVII Convegno AMASES**, Ischia, 8-11 settembre 1993, 189-199

*Monotonely Cauchy Locally-solid Topologies*, **Order** 7, 407-416, 1991 (joint with T. Traynor)

*Alcuni risultati per multifunzioni finitamente additive*, **Atti XV Convegno AMASES**, Grado, 26-29 settembre 1991, 91-99

*Integration: Uniform Structure*, **Journal of Math. Anal. Appl.** 159, 373-381, 1991 (joint with A. Avallone)

*Common Extension of Group-valued Charges*, **Boll. UMI** ser. 7 vol 5A, 157-162, 1991 (joint with K. P. S. Bhaskara Rao)

*A Remark on a Frechet-Smulian Criterion*, **Bull. of Polish Acad. of Sci.** 37 n. 7/12, 385-389, 1989

*Scelte comunitarie coalizioni ed infiniti agenti*, Preprint n. 54, 1989, Dipartimento di Matematica e Applicazioni, University Federico II, Naples

*Core-Walras Equivalence and Quasi-countable Additivity*, **Studi Economici** 38, 25-41, 1989

*Sequential Compactness for Sets of Sugeno Fuzzy Measures*, **Fuzzy Sets and System** 21, 243-247, 1987

*The Convergence With Respect to Small Systems Comes From a Metric*, **Rend. Circ. Mat. Palermo** Ser. II 36, 110-113, 1987

*Controls of Families of Finitely Additive Functions*, **Ricerche di Matematica** 35, 291-302, 1986

*Topological Boolean Rings of First and Second Category. Separating Points for a Countable Family of Measures*, **Radovi Matematicki** 2, 113-125, 1986 (joint with H. Weber)

*A Proof of Extension Theorems of  $s$ -bounded Set Functions*, **Atti Sem. Mat. Fis. Univ. Modena** 34, 65-70, 1985/86

*Su un teorema di decomposizione alla Lebesgue per topologie su anelli di insiemi*, **Rend. Acc. Sci. Fis. Mat. Napoli** Ser. IV vol. 51/1 anno 122, 61-65, 1984

*Decomposizioni di topologie su algebre di insiemi*, Atti II Convegno di Topologia Taormina 4-7 aprile 1984. Supp. **Rend. Circ. Mat. Palermo** Ser. II n.12, 181-187, 1986

**Work in Progress**

*Anonymous, non-manipulable, binary social choice with infinite voters, (joint with Surekha Rao and K.P.S. Bhaskara Rao)*