## **CURRICULUM VITAE ET STUDIORUM OF EMMA D'ANIELLO**



PLACE OF BIRTH: Napoli (ITALY).

**DEGREE**: Mathematics, "Università degli Studi di Napoli Federico II", July 1994, grade 110/110, summa cum laude.

PhD: Mathematics, "Università degli Studi di Napoli Federico II", April 1999.

**ABILITAZIONE SCIENTIFICA NAZIONALE**: Habilitated as Full Professor (Mathematical Analysis) since August 2, 2017.

## **ACADEMIC POSITIONS AND CAREER:**

- 1. Tenure Track Associate Professor of ANALYSIS since November 1, 2009, at Seconda Università degli Studi di Napoli (renamed "Università degli Studi della Campania "Luigi Vanvitelli"), Scuola Politecnica e delle Scienze di Base, Dipartimento di Matematica e Fisica.
- 2. Associate Professor of ANALYSIS since November 1, 2006.
- 3. Tenured Assistant Professor of ANALYSIS since the 3rd of January, 2003.
- 4. Assistant Professor of ANALYSIS since the 3<sup>rd</sup> of January 2000.

### **SOME PERIODS OF STUDY AND WORK ABROAD:**

- During the entire academic year 1993 1994 she was a student of the School of Mathematics and Statistics, University of Birmingham (UK), with a scholarship from the Erasmus project.
- During the entire academic year 1996 1997 she was enrolled in the Ph.D. program of the Department of Mathematics of Wesleyan University, Middletown (CT), USA, invited as Visiting Graduate Student.
- From April 21 until May 21, 2000, she conducted research in the US, invited as Van Vleck Visiting Scholar in Mathematics by the Department of Mathematics of Wesleyan University, Middletown (CT), USA.
- From May 12 until June 7, 2004, she conducted research in the Mathematics Department of Washington and Lee University, Lexington (VA), USA, with the local Real Analysis research group, to which Paul Humke and Michael Evans belong, invited by the chair of the Department, Wayne M. Dymacek, as Visiting Scholar.
- From April 10 until May 4, 2007, she did research in the Mathematics Department of the Instituto Superior Técnico of Lisbon, invited by Henrique Oliveira. The Centre of Mathematical Analysis Geometry and Dynamical Systems of the Instituto Superior Técnico (IST) and the Technical University of Lisbon supported her visit.
- From May 24 until June 9, 2008, she conducted research at the Department of Mathematics of St. Olaf College, Northfield (MN), USA, with Paul D. Humke, invited as Visiting Scholar.
- From April 24 until May 11, 2009, she did research in the Mathematics Department of the Instituto Superior Técnico of Lisbon, invited by Henrique Oliveira. The Centre of Mathematical Analysis Geometry and Dynamical Systems of the Instituto Superior Técnico (IST) and the Technical University of Lisbon supported her visit.
- From February 22 until March 22, 2012, she did research in the Oxford Center for Nonlinear Analysis (OxPDE), Mathematical Institute, University of Oxford, with Bernd Kirchheim. The Mathematical Institute, University of Oxford, supported her visit.
- From May 12 until May 28, 2014, she did research at the Max Planck Institut fur Mathematik and at the Department of Mathematics of the University of Leipzig, with Professor Bernd Kirchheim. Her visit was supported by the Max Planck Institut.
- During the Winter Term 2014/15 she held the *Giovanni Prodi Visiting Chair* at the University of Würzburg, Germany.
- From February 22 until March 6, 2016, she did research in Paris, at the Université Paris-Sud and the Institut Henri Poincarè, with Professor Laurent Moonens. Her visit was supported by the Université Paris-Sud.
- From April 5 until April 12, 2017, she did research in Paris, at the Université Paris-Sud, with Professor Laurent Moonens. Her visit was supported by the Université Paris-Sud.
- From June 13 until June 25, 2017, she did research at the College of Wooster, Ohio (USA, with Pamela Pierce, Professor from the College of Wooster, and Ondrej Zindulka, Professor from the Czech Technical University and Visiting Professor at the College of Wooster for the academic year 2016/2017. Her visit was supported by the College of Wooster and an NSF grant.
- From June 14 until June 22, 2018, she did research at the University of Palermo, within the GNAMPA project 2018 "Approximation Methods Using Integral Sums and Chaotic Dynamical Systems", of which she was a member.
- From January 26 until February 9, 2019, she did research at the University Paris-Sud, Orsay, with Professor Laurent Moonens. Her visit was supported by the Université Paris-Sud (LYSM).
- From March 14 until March 19, 2019, she did research at the University of Palermo, within the GNAMPA project 2018 "Approximation Methods Using Integral Sums And Chaotic Dynamical Systems", of which she was a member.

- From March 14 until April 12, 2022, she did research, invited as a Visiting Professor, in Paris, at the Département de Mathématiques et Applications of the École Normale Supérieure PSL University.
- June 6- June 9, 2023, brief research visit, in Paris, invited by the Département de Mathématiques et Applications of the École Normale Supérieure PSL University.

#### **TEACHING EXPERIENCE:**

During the academic year 1996-1997 she was a teaching assistant (TA) at Wesleyan University, Middletown (CT), USA. Since 1999 she has been a teaching assistant of analysis courses. From 2000 she teaches her own classes of all fields of Mathematical Analysis.

## SCHOLARSHIPS, ACCOMPLISHMENTS AND PRIZES

- 1) Erasmus scholarship in the academic year 1993-94 at the University of Birmingham (UK).
- 2) Scholarship from Istituto Nazionale di Alta Matematica "F. Severi" (INDAM), to study in this Institute in Rome, during the academic year 1994-95.
- 3) Research scholarship from Istituto Nazionale di Alta Matematica "Francesco Severi" to do research in "Dipartimento di Matematica e Applicazioni R. Caccioppoli, Università di Napoli Federico II", from January until December 1999.
- 4) During the Winter Term 2014/15 she held the *Giovanni Prodi Visiting Chair* at the University of Würzburg, Germany, initially funded by the DAAD.
- 5) Every year at the Summer Symposium in Real Analysis, which is organized by the mathematical journal Real Analysis Exchange, a prize, "the Andy Award", is assigned (the name originates from the name "Andy" of Professor Andrew M. Bruckner, University of California in Santa Barbara). The Andy 2004 was assigned to her during the Summer Symposium XXVIII, Slippery Rock (PA), USA, June 8-13, 2004 (see: http://www.stolaf.edu/people/analysis).

## INVITED SEMINARS, COORDINATION, RESEARCH AND OTHER SCIENTIFIC ACTIVITIES:

She is one of the reviewers of Mathematical Reviews and of Zentralblatt. She has refereed papers for several international journals.

She has given several invited talks and plenary talks, and seminars in Italy and abroad. She was part of the organizing committee of several scientific symposia.

She is a member of the Editorial Board of The Real Analysis Exchange (http://www.stolaf.edu/people/analysis/).

She participated in

- 1. the biannual national research project PRIN 2002, entitled "Analisi Reale e Teoria della Misura" (scientific area: Mathematical and Computer Sciences),
- 2. the biannual national research project PRIN 2004, entitled "Analisi Reale e Teoria della Misura" (scientific area: Mathematical and Computer Sciences),
- 3. the biannual national research project PRIN 2007, entitled "Valore ed Equità in Mercati con Progetti Pubblici ed Informazione Asimmetrica" (scientific area: Economical and Statistical Sciences), and the

- 4. the triennial national research project PRIN 2010-2012, entitled "Calculus of Variations" (started: 01/02/2013; ended: 01/02/2016).
- 5. She was the scientific co-ordinator of the research Project GNAMPA 2011 entitled "Continuous and Discrete Iteration and Optimization".
- 6. She was the scientific co-ordinator of the research Project GNAMPA 2014 entitled "Spazi di Sobolev, misure di Hausdorff, e proprietà di Lusin generalizzata".
- 7. She was the scientific co-ordinator of the research project entitled "Dynamical Systems, Fluidodynamcs and Symmetrization", financially supported by Regione Campania (the project officially started on the 5<sup>th</sup> of November 2015 and ended on the 4<sup>th</sup> of March 2018).).
- 8. She was a member of the GNAMPA project 2018 "Approximation Methods Using Integral Sums and Chaotic Dynamical Systems".
- 9. She was a member of the GNAMPA project 2019 "Geometric, Analytical and Dynamic Singular and Degenerate Differential Problems".
- 10. She was a member of a Reaserch Project Valere 2019 of her institution, Univ. Vanvitelli.
- 11. She is a member of the project COSYMA of which Univ. Vanvitelli is partner.

#### ORGANIZATION OF CONFERENCES

SUMMER SYMPOSIUM IN REAL ANALYSIS XLV, Università della Campania "Luigi Vanvitelli", 19-23 June 2023. Local Director of the Symposium (see <a href="https://www.matfis.unicampania.it/45-symposium-real-analysis">https://www.matfis.unicampania.it/45-symposium-real-analysis</a> for this edition, and see <a href="https://www.stolaf.edu/people/analysis">www.stolaf.edu/people/analysis</a> for the previous editions).

SUMMER SYMPOSIUM IN REAL ANALYSIS XLIV, Université Paris-Saclay (Orsay) and the École Normale Supérieure (Paris), 22-24 June 2021 (<a href="https://ssra44.sciencesconf.org">https://ssra44.sciencesconf.org</a>) Member of the organizing committee (see www.stolaf.edu/people/analysis for the previous editions).

SYMPOSIUM "TWO DAYS IN REAL ANALYSIS - Two full afternoons devoted to real analysis, discrete dynamical systems, measure theory and beyond"

(<a href="https://www.matfis.unicampania.it/2days-in-real-analysis">held on Microsoft TEAMS, June 23-24, 2021.</a>

She was a member of the organizing (and scientific) committee, together with her PhD student Martina Maiuriello, Paul D. Humke and Laurent Moonens.

SYMPOSIUM "FOUR DAYS IN LINEAR DYNAMICS - *Linear Dynamics: current trends and open questions*" (<a href="https://www.matfis.unicampania.it/4days-in-linear-dynamics">https://www.matfis.unicampania.it/4days-in-linear-dynamics</a>), held on Microsoft TEAMS, June 14-17, 2021.

The organizing (and scientific committee) was composed of Martina Maiuriello (her PhD student) and her.

"HUTCHINSON-BARNSLEY THEORY OF FRACTALS" SESSION of the "Joint meeting of the Italian Mathematical Union, the Italian Society of Industrial and Applied Mathematics and the Polish Mathematical Society", Wroclaw 17-20 September 2018 (http://umi-simai.ptm.org.pl) She was a member of the organizing and scientific committee of the session.

She was in the organizing Committee of several editions of CARTEMI (Convegno di Analisi Reale e Teoria della Misura).

# CONFERENCE "FUNCTION SPACES, PROXIMITIES AND QUASI - UNIFORMITIES"

She was a member of the organizing committee of the international conference "Functions spaces, proximities and quasi - uniformities", which was held at the Department of Mathematics of "Seconda Università di Napoli", from September 14 to September 18, 2001.

### SUPERVISION OF THESES

Since 2004 she has been thesis advisor for the Bachelor Degree in Mathematics, the Bachelor Degree in Mathematics and Computer Science, and the Master Degree in Mathematics (more than 50 theses up to now).

The students Martina Maiuriello and Valeria Moccia, who graduated having the her as supervisor of their Master theses in Mathematics with 110/110 cum laude (titles of the respective theses: "Discrete Dynamic Systems. Attractors and Chaos" and "Discrete Dynamic Systems. Differences Equations"), were invited by her Polish colleagues Grazyna Horbaczewska and Filip Strobin to participate, sponsored by the Polish Mathematical Society, presenting communications on their studies, in the "Hutchinson-Barnsley Theory of Fractals" session of the "Joint meeting of the Italian Mathematical Union, the Italian Society of Industrial and Applied Mathematics and the Polish Mathematical Society ", Wroclaw 17-20 September 2018 (http://umi-simai.ptm.org.pl).

Moccia and Maiuriello were, respectively, admitted to the PhD program in Mathematics, Physics and Applications of the University of Campania "Luigi Vanvitelli" and to the PhD program in Mathematics of the University of Naples "Federico II", in the academic year 2018-2019 (35th cycle).

Martina Maiuriello (who received her Master degree in Mathematics with commendation for her university career) defended in April 2022 her PhD thesis, within the PhD program in Mathematics, Physics and Applications of the University of Campania "Luigi Vanvitelli". She was the supervisor of Maiuriello's PhD thesis, focused on topics related to chaos and, in general, the dynamic behavior of linear operators (Linear Dynamics), research area in the intersection between Dynamic Systems and Operator Theory.

She was *co-supervisor*, in 2021, of the *Master Thesis of* Melissa Eva Finster, entitled "Synchronization of Kuramoto and FitzHugh-Nagumo Networks", Institut für Mathematik Julius-Maximilians-Universität Würzburg, supervisor Professor Alfio Borzì.

She is co-supervisor of the Master Thesis of Jonas Dorè, entitled ""A Recurrent Neural Network to Approximate Koopman Operators with Applications to Oscillatory Systems", Institut für Mathematik Julius-Maximilians-Universität Würzburg, supervisor Professor Alfio Borzì.

She is a member of the Board of Professors of the Research Doctorate in Mathematics, Physics and Applications of the University of Campania "Luigi Vanvitelli", 36<sup>th</sup>, 37<sup>th</sup>, 38<sup>th</sup> and 39th cycles.

### OTHER PROFESSIONAL ACTIVITIES

She was a member of the examining Committee of "SCUOLA INTERUNIVERSITARIA CAMPANA DI SPECIALIZZAZIONE ALL'INSEGNAMENTO per l'Indirizzo Fisico, Informatico, Matematico con sede presso la Seconda Università degli Studi di Napoli (classi di abilitazione: A047 (Matematica) – A049 (Matematica e Fisica)" in 2005 and in 2007.

She was a member of the examining committee designed for the assignment of the ERASMUS grants at the "Facoltà di Scienze Matematiche Fisiche e Naturali" of "Seconda Università degli Studi di Napoli in the academic year 2007/2008 and in the academic year 2008/2009.

During the year 2010/2011 she was involved in the project "LAUREE SCIENTIFICHE" as responsable for the Lab "Il concetto di Misura" ("The concept of measure"). The project "Lauree Scientifiche" is devoted to secondary school students and teachers, in order to improve and promote the interaction between them and the university reality.

#### INTERNAZIONALIZATION

She was a member of the Committee for the Internationalization, of the Faculty of Mathematical, Physical and Natural Sciences of the Second University of Naples, from 2010 to 2012.

### ORIENTATION ACTIVITIES

She carried out guidance activities devoted to students of Secondary School for the choice of the university degree, as a representative of the Faculty of Mathematical, Physical and Natural Sciences of the Second University of Naples, from 2010 to 2012.

## **AVA** (Self Assessment-Evaluation-Accreditation).

From the academic year 2018-2019 she is president of the Joint Professors-Students Committee of the Department of Mathematics and Physics of the University of Campania "Luigi Vanvitelli", of which she is a member also as a representative for the Council of Aggregate Study Programs (CCSA) in Mathematics.

## REFERENCE FOR QUALITY

She was referent for the didactic for the Bachelor Degree in Data Analytics in the academic years 2018-2019 and 2019-2020.

From 2020-2021 she is referent for the didactic for the Bachelor Degree in Mathematics.

### SEMINARS ORGANIZATION IN THE DEPARTMENT

She is responsible for organizations of the seminars of the Department of Mathematics and Physics.

#### MEMBER OF EVALUATION COMMITTEES

#### ASSISTANT PROFESSOR OF TYPE A

She was a member of the Committee of the Public Selection for the recruitment of a type A researcher with a temporary employment relationship, for a period of three years (sector 01 / A3 - Mathematical Analysis, Probability and Mathematical Statistics, Profile: MATHEMATICAL ANALYSIS (identification: code 2\_RTDA\_2017\_ 48; University of Naples "Federico II").

#### ASSISTANT PROFESSOR OF TYPE B

She was a member of the Committee of the Public Selection for the recruitment of a type B researcher with a temporary employment relationship, for a period of three years (sector 01 / A3 - Mathematical Analysis, Probability and Mathematical Statistics, Profile: MATHEMATICAL ANALYSIS (identification: D.R. n. 413, 29.06.2016).

#### ASSISTANT PROFESSOR OF TYPE A

She was a member of the Committee of the Public Selection for the recruitment of a type A researcher with a temporary employment relationship, for a period of three years (sector 01 / A3 - Mathematical Analysis, Probability and Mathematical Statistics, Profile: MATHEMATICAL ANALYSIS (identification: - PON\_AIM\_RTDA\_L1\_2019\_01; University of Naples "Federico II").

## **RESEARCH GRANT**

She was a member of the Examining Committee for the awarding of a one-year research grant on the topic "Hardy type Variational Problems" (Department of Mathematics and Physics, University of Campania "Luigi Vanvitelli", DR n. 566, June 11, 2021).

# **RESEARCH GRANT**

She was a member of the Examining Committee for the awarding of a two-year research grant on the topic "Problems of ambiguity in Game Theory" (Department of Economics, University of Campania "Luigi Vanvitelli", DR n. 627 September 26, 2017).

#### RESEARCH GRANT

She was a member of the Examining Committee for the awarding of a six-months research grant on the topic "Dynamics of Linear Operators" Hardy type Variational Problems" (Department of Mathematics and Physics, University of Campania "Luigi Vanvitelli", D.D. n. 83 prot.n. 65556 del 26 aprile 2022).

#### **ERAMUS TEACHING MOBILITY**

She visited, under the auspices of the ERASMUS teaching staff mobility program, the University of Patras, Greece (April 12-18, 2010), the Instituto Superior Técnico (IST), Lisbon, Portugal (April 26-May2, 2010), Humboldt University, Berlin, Germany (May 17-23, 2010), the Universidad de Sevilla, Spain (May 15-22, 2011).

She was supposed to visit the Faculty of Mathematics and Computer Science of the University of Łódz, Poland, from March 30 until April 3, 2020, but, because of the coronavirus emergency, her Erasmus stay was postponed to a later date.

#### PARTICIPATION IN SCIENTIFIC SOCIETIES

- -Member of the ISDE since 2017 (International Society of Difference Equations (http://www.isdeds.com/)).
- -Member, since when she was a PhD student, of the Italian Mathematical Union (UMI).
- Member, since when she was a PhD student, of the National Research Groups of the National Institute of Higher Mathematics (INdAM): first in the National Group for Functional Analysis and its Applications (GNAFA) and, subsequently, in the National Group for Mathematical Analysis, Probability and their Applications (GNAMPA).
- Member, since when she became an assistant professor, of the American Mathematical Society (AMS).
- -Member, since 2019, of the European Mathematical Society (EMS) and of the European Women in Mathematics (EWM).

#### MAIN RESEARCH INTERESTS:

Real Analysis, Measure Theory, Dynamical Systems.

**PAPERS:** 51 published articles and one in press, three preprints (two of which published in arXive), one book chapter (\*), and 9 conference proceedings.

(\*) She was invited by Professor Jose S. Cánovas of the Universidad Politécnica de Cartagena, Spain, to contribute to the realization of the volume entitled "Advances in Discrete Dynamics", for NOVA Science Publishers, Inc., Hauppauge (NY), USA, of which Canovas is editor, with the drafting of a chapter concerning discrete dynamical systems, which he had been dealing with for some time (chapter title: (Chapter 3)  $\omega$ -limit sets of discrete-time dynamical systems; series: Mathematics Research Development; ISBN: 978-1-61209-678-0; year of publication: 2012).

### **PUBLISHED PAPERS**

[I] E. D'ANIELLO, M. MAIURIELLO, "On spaceability of shift-like operators on L^p", J. Math. Anal. Appl. 2023, Volume 526, Issue 1, 127177 (https://doi.org/10.1016/j.jmaa.2023.127177)

[II] E. D'ANIELLO, A. GAUVAN, L. MOONENS, "(Un)boundedness of directional maximal operators through a notion of "Perron capacity" and an application", Proc. Amer. Math. Soc. 2022 (DOI: 10.1090/proc/16291)

[III] E. D'ANIELLO, M. MAIURIELLO, "On the spectrum of weighted shifts", Rev. Real Acad. Cienc. Exactas Fis. Nat. Ser. A-Mat. (2023), 19 pages (https://doi.org/10.1007/s13398-022-01328-z)

[IV] E. D'ANIELLO, U.B. DARJI, M. MAIURIELLO, "Shift-like operators on L^p(X)", *J. Math. Anal. Appl.* 515 (2022), no. 1, Paper No. 126393 (ISSN: 0022247X; DOI: 10.1016/j.jmaa.2022.126393)

[V] D. BONGIORNO, E. D'ANIELLO, U.B. DARJI, L. DI PIAZZA, "Linear dynamics induced by odometers", *Proc. Amer. Math. Soc.* 150 (2022), no. 7, 2823–2837(ISSN: 00029939;

- DOI: 10.1090/proc/15354).
- [VI] E. D'ANIELLO, U.B. DARJI, M. MAIURIELLO, "Generalized hyperbolicity and shadowing in L<sup>p</sup> Spaces", J. Differential Equations, Vol. 298, 2021, 68-94 (ISSN: 00220396 DOI: 10.1016/j.jde.2021.06.038)
- [VII] E. D'ANIELLO, M. MAIURIELLO, "A survey on composition operators on some function spaces", Aequat. Math. 2020, Vol. 95, 2021, 677–697 (ISSN: 00019054; https://doi.org/10.1007/s00010-020-00768-5).
- [VIII] E. D'ANIELLO, M. MAIURIELLO, "On some generic small Cantor spaces", Zeitschrift für Analysis und ihre Anwendungen (Journal of Analysis and its Applications) Vol. 39, n. 3, 2020, 277-288, Zeitschrift für Analysis und ihre Anwendungen (Journal of Analysis and its Applications) (Print ISSN: 0232-2064; Online ISSN: 1661-4534; DOI: 10.4171/ZAA/1660; https://arxiv.org/abs/1905.07184)
- [IX] E. D'ANIELLO, L. MOONENS, J. ROSENBLATT, "Differentiating Orlicz spaces with rare bases of rectangles", Annales Academiae Scientiarum Fennicae. Mathematica, Vol. 45, 2020, 411-427 (Online ISSN: 1798-2383; Print ISSN: 1239-629X; DOI: 10.5186/aasfm.2020.4523)
- [X] E. D'ANIELLO, S. ELAYDI, "The structure of  $\omega$ -limit sets of an asymptotically non-autonomous discrete dynamical system", Discrete & Continuous Dynamical System Series B, Vol. 25, No. 3, 2020, 903-915 (Online ISSN 1553-524X; Print ISSN 1531-3492; DOI: 10.3934/dcdsb.2019195)
- [XI] E. D'ANIELLO, T.H. STEELE, "Attractors for classes of iterated function systems", European Journal of Mathematics, Vol. 5, No. 1, 2019, 116-137 (Online ISSN: 2199-6768; Print ISSN: 2199-675X; DOI: 10.1007/s40879-018-0280-7)
- [XII] E. D'ANIELLO, T.H. STEELE, "Attractors for classes of iterated function systems", European Journal of Mathematics, 2018 (Online ISSN: 2199-6768; Print ISSN: 2199-675X; https://doi.org/10.1007/s40879-018-0280-7)
- [XIII] E. D'ANIELLO, "Non-self-similar sets in [0,1]^N of arbitrary dimension", Journal of Mathematical Analysis and Applications, Vol. 42, No. 2, 2017, 1123-1128 (ISSN: 0022-247X;DOI: 10.1016/j.jmaa.2017.07.046)
- [XIV] E. D'ANIELLO, L. MOONENS, "Averaging on n-dimensional rectangles", Annales Academiae Scientiarum Fennicae. Mathematica, Vol. 42, No. 1, 2017, 119-133. (ISSN: 1239-629X; DOI: 10.5186/aasfm.2017.4207)
- [XV] E. D'ANIELLO, T.H. STEELE, "A non self-similar set", Real Analysis Exchange, Vol. 41, No. 2, 2015/2016, 247-250. (ISSN: 0147-1937)
- [XVI] E. D'ANIELLO, T.H. STEELE, "Attractors for iterated function systems", Journal of Fractal Geometry, Vol. 3, No. 2, 2016, 95-117. (ISSN: 2308-1309, DOI: 10.4171/JFG/31)
- [XVII] E. D'ANIELLO, T.H. STEELE, "Attractors for iterated function schemes on [0,1]<sup>N</sup> are exceptional", Journal of Mathematical Analysis and Applications, Vol. 424, No. 1, 2015, 537–541. (ISSN: 0022-247X; DOI: 10.1016/j.jmaa.2014.11.032)

[XVIII] E. D'ANIELLO, T.H. STEELE, "Self-similarity in the collection of \$\omega\$-limit sets", Zeitschrift für Analysis und ihre Anwendungen (Journal of Analysis and its Applications), Vol. 33 No. 1, 2014, 87–100. (ISSN: 0232-2064; DOI: 10.4171/ZAA/1500)

[XIX] E. D'ANIELLO, T.H. STEELE, "The persistence of  $\omega$ -limit sets defined on compact spaces", Journal of Mathematical Analysis and Applications, Vol. 413, No. 2, 2014, 789–799. (ISSN: 0022-247X; DOI: 10.1016/j.jmaa.2013.12.026)

[XX] E. D'ANIELLO, T.H. STEELE, "Chaotic behaviour of the map \$x \mapsto \omega(x,f)\$", Central European Journal of Mathematics, Vol. 12, No. 4, 2014, 584–592. (ISSN: 1895-1074; DOI: 10.2478/s11533-013-0360-3)

[XXI] E. D'ANIELLO, T.H. STEELE, "Stability in the family of \$\omega\$-limit sets of alternating systems", Journal Mathematical Analysis and Applications, Vol. 389, No. 2, 2012, 1191-1203. (ISSN: 0022-247X; DOI: 10.1016/j.jmaa.2011.12.056)

[XXII] E. D'ANIELLO, U.B. DARJI, "Chaos among self-maps of the Cantor Space", Journal of Mathematical Analysis and Applications, Vol. 381, No. 2, 2011, 781–788. (ISSN: 0022-247X; DOI: 10.1016/j.jmaa.2011.03.065)

[XXIII] E. D'ANIELLO, T.H. STEELE, "The \$\omega\$-limit sets of alternating systems", Journal of Difference Equations and Applications, Vol. 17, No. 12, 2011, 1793-1799 (ISSN: 1023-6198; DOI: 10.1080/10236198.2010.488227)

[XXIV] E. D'ANIELLO, P.D. HUMKE, T.H. STEELE, "The space of adding machines generated by continuous self maps of manifolds", Topology and its Applications, Vol. 157, No.5, 2010, 954-960 (ISSN: 0166-8641; DOI: 10.1016/j.topol.2009.12.012)

[XXV] E. D'ANIELLO, P. DE LUCIA, "Approximate differentiability almost everywhere", Zeitschrift für Analysis und ihre Anwendungen (Journal for Analysis and its Applications), Vol. 29, No. 1, 2010, 107-115. (ISSN: 0232-2064; DOI: 10.4171/ZAA/1400)

[XXVI] E. D'ANIELLO, H. OLIVEIRA, "Pitchfork bifurcation for non-autonomous interval maps", Journal of Difference Equations and Applications, Vol. 15, No. 3, 2009, 291-302 (ISSN: 1023-6198; DOI: 10.1080/10236190802258669)

[XXVII] E. D'ANIELLO, T.H. STEELE, "Prevalence and structure of adding machines for cellular automata", Journal of Mathematical Analysis and Applications, Vol. 352, No.2, 2009, 856-860. (ISSN: 0022-247X; DOI: 10.1016/j.jmaa.2008.11.037)

[XXVIII] E. D'ANIELLO, U.B. DARJI, T.H. STEELE, "Ubiquity of odometers in topological dynamical systems", Topology and its Applications, Vol. 156, No. 2, 2008, 240-245. (ISSN: 0166-8641; DOI: 10.1016/j.topol.2008.07.003)

[XXIX] E. D'ANIELLO, T.H. STEELE, "Approximating \$\omega\$-limit sets with periodic orbits", Aequationes Mathematicae, Vol. 75, No. 1-2, 2008,93-102. (ISSN: 0001-9054; DOI: 10.1007/s00010-007-2893-7)

[XXX] E. D'ANIELLO, P. DE LUCIA, "On approximate/asymptotic differentiability a.e.", Rend. Acc. Sc. Fis. mat. Napoli (Società Nazionale di Scienze, Lettere e Arti in Napoli. Rendiconto dell'Accademia delle Scienze Fisiche e Matematiche. Serie IV), Vol. LXXIV, 2007,61-73. (ISSN: 0370-3568)

[XXXI] E. D'ANIELLO, U.B. DARJI, "Smooth images of the irrationals", Real Analysis Exchange, Vol. 32, No. 1, 2006/2007, 19-28 (ISSN: 0147-1937)

[XXXII] E. D'ANIELLO, T.H. STEELE, "Asymptotically stable sets and the stability of \$\omega\$-limit sets", Journal of Mathematical Analysis and Applications, Vol. 321, No. 2, 2006, 867-879.(ISSN: 0022-247X; DOI: 10.1016/j.jmaa.2005.08.077)

[XXXIII] E. D'ANIELLO, "Chaos and iterative behavior", Real Analysis Exchange 2005, 29th Summer Symposium in Real Analysis,11-28. (ISSN: 0147-1937)

[XXXIV] E. D'ANIELLO, P. DE LUCIA, "On summability of partial derivatives of Lipschitz functions", Ricerche di Matematica, Vol. LIII, No.2, 2004, 279-289. (ISSN: 0035-5038)

[XXXV] E. D'ANIELLO, "Investigations of Smooth Functions and Analytic Sets Using Fractal Dimensions", Bollettino della Unione Matematica Italiana, Vol. 7B, No. 3, 2004,637-646 (su scopus ISSN: 0392-4041; Web of Science ISSN: 0041-7084)

[XXXVI] E. D'ANIELLO, P. DE LUCIA, "On pointwise Hölder functions", Real Analysis Exchange, Vol. 29, No. 2, 2003/2004, 713-728(ISSN: 0147-1937)

[XXXVII] E. D'ANIELLO, T.H. STEELE, "A \$C^1\$ function for which the \$\omega\$-limit points are not contained in the closure of periodic points", Transactions of the American Mathematical Society, Vol. 355, No. 6, 2003, 2545-2556 (ISSN: 0002-9947; DOI: 10.1090/S0002-9947-03-03258-6)

[XXXVIII] E. D'ANIELLO, "Level sets of Hölder functions and Hausdorff measures", Zeitschrift für Analysis und ihre Anwendungen (Journal for Analysis and its Applications), Vol. 21, No. 3, 2002, 691-707 (ISSN: 0232-2064)

[XXXIX] E. D'ANIELLO, "Uncountable level sets of Lipschitz functions and analytic sets", Scientiae Matematicae Japonicae, Vol. 56, No. 2, 2002,359-365 (ISSN: 1346-0862)

[XL] E.M. COVEN, E. D'ANIELLO, "Chaos for maps of the interval via \$\omega\$ - limit points and periodic points", Atti del SeminarioMatematico e Fisico dell'Università di Modena, Vol. 49, No. 2, 2001, 523-530 (ISSN: 0041-8986)

[XLI] E. D'ANIELLO, U.B. DARJI, "\$C^n\$ functions, Hausdorff measures and analytic sets", Advances in Mathematics, Vol. 164, No. 1, 2001, 117-143.(ISSN: 0001-8708; DOI:10.1006/aima.2001.2012)

[XLII] J. APPELL, E. D'ANIELLO, M. VÄTH, "Some remarks on small sets", Ricerche di Matematica Vol. 50, No. 2, 2001, 255-274, addendum Vol 2005. (ISSN: 0035-5038)

[XLIII] E. D'ANIELLO, U.B. DARJI, "On the existence of C^1 functions with perfect level sets", Zeitschrift für Analysis und ihre Anwendungen (Journal for Analysis and its Applications), Vol. 19, No. 3, 2000,847-852.(ISSN: 0232-2064; scopus id: 2-s2.0-23044522555)

[XLIV] E. D'ANIELLO, J. D. M. WRIGHT, "Finding measures with given marginals", Quarterly Journal of Mathematics. Oxford, Vol. 51, No. 4, 2000, 405-416. (ISSN: 0033-5606; DOI: 10.1093/qjmath/51.4.405)

[XLV] E. D'ANIELLO, "A minimax theorem in Banach lattices", Positivity, Vol. 4, No. 2, 2000, 143-160. (ISSN: 1385-1292; su scopus; DOI: 10.1023/A:1009822007637)

[XLVI] E. D'ANIELLO, "On the existence of vector measures with given marginals", Real Analysis Exchange, Vol. 25, No. 1, 1999/2000, 437-448.(ISSN: 0147-1937)

[XLVII] E. D'ANIELLO, K.P. S. BHASKARA RAO, R. M. SHORTT, "A Stone space approach to the existence of bounded common extensions", Journal of Mathematical Analysis and Applications, Vol. 219, No. 2, 1998, 442-454, addendum Vol. 2000. (ISSN: 0022-247X; DOI: 10.1006/jmaa.1997.5831)

[XLVIII] E. D'ANIELLO, R.M. SHORTT, "Vector - valued capacities", Rendiconti del Circolo Matematico di Palermo, Serie II, Vol. 47, No. 2, 1998, 311-324. (ISSN: 0009-725X; DOI: 10.1007/BF02844370)

[XLIX] E. D'ANIELLO, A. HIRSHBERG, K.P.S. BHASKARA RAO, R.M. SHORTT, "Bounded common extensions of vector measures", Real Analysis Exchange, Vol. 22, No. 2, 1996/1997, 766-774.(ISSN: 0147-1937)

[L] E. D'ANIELLO, "Nonatomic states", Mathematica Slovaca, Vol. 48, No. 4, 1998,337-345. (ISSN: 0139-9918)

[LI] E. D'ANIELLO, M.G. GRAZIANO, "An Hewitt-Yosida theorem for functions defined on minimal clans", Rend.Acc.Sci.fis.mat.Napoli (Società Nazionale di Scienze, Lettere e Arti in Napoli. Rendiconto dell'Accademia delle Scienze Fisiche e Matematiche. Serie IV),Vol. 62, 1995, 333-345. (ISSN: 0370-3568)

### **CHAPTER OF A BOOK**

• Capitolo 3 del volume dal titolo "Advances in Discrete Dynamics"; casa editrice: NOVA Publishers, Nova Science Publishers, Inc., Hauppauge (NY),USA; editore: Jose S. Canovas (Universidad Politecnica de Cartagena, Spain); titolo del capitolo: "\$\omega\$-limit sets of discrete-timedynamical systems"; pagine: 91-114; serie: Mathematics Research Development; ISBN: 978-1-61209-678-0; anno di pubblicazione: 2012.

### PAPER ACCEPTED FOR PUBLICATION

[§] E. D'ANIELLO, A. GAUVAN, L. MOONENS, J.M. ROSENBLATT, "Almost everywhere convergence for Lebesgue differentiation processes along rectangles", 2022, accepted (in 2023) for publication in Journal of Fourier Analysis and Applications (https://arxiv.org/abs/2207.0217)

### **PREPRINT**

[§] E. D'ANIELLO, M. MAIURIELLO, J.B. SEOANE–SEPÚLVEDA, "The interplay between recurrence and hypercyclicity in dissipative contexts", 2023 (sottoposto a rivista per pubblicazione) (https://arxiv.org/abs/2303.09837)

[§§] E. D'ANIELLO, J. FERNÁNDEZ SÁNCHEZ, M. MAIURIELLO, J.B. SEOANE–SEPÚLVEDA, "Bounded real functions and algebraic genericity", 2022 (sottoposto a rivista per pubblicazione)

[§§§] E. D'ANIELLO, H. M. OLIVEIRA, "Huygens synchronisation of three clocks equidistant from each other", 2019 (https://arxiv.org/abs/1905.03534)

### **PROCEEDINGS**

- 1) E. D'ANIELLO, "On topological chaos", Real Analysis Exchange, Vol. 2012 suppl. (36th Summer Symposium in Real Analysis, 25-30 June 2012, Pennsylvania State University, Berks (USA)), 47-56. (ISSN: 0147-1937)
- 2) E. D'ANIELLO, "Chaos among self-maps of an n-dimensional manifold and of the Cantor space", Real Analysis Exchange, Vol. 2011 suppl. (35th Summer Symposium in Real Analysis, 5-11 June 2011, The Rényi Mathematical Institute, Budapest), 107-116. (ISSN: 0147-1937)
- 3) E. D'ANIELLO, T.H. STEELE, "Adding machines and typical behavior of continuous self-maps of manifolds", Real Analysis Exchange, Vol. 2009 suppl. (33rd Summer Symposium in Real Analysis, 23-27 June 2009, Southeastern Oklahoma State University (USA)), 30-34. (ISSN: 0147-1937)
- 4) E. D'ANIELLO, "Continuous self-maps of a compact metric space and adding machines", Real Analysis Exchange, Vol. 2008 suppl. (32nd Summer Symposium in Real Analysis, 10-14 June 2008, Chicago State University, Chicago (USA)), 1-4. (ISSN: 0147-1937; scopus id: 2-s2.0-85032368069)
- 5) E. D'ANIELLO, H. OLIVEIRA, "Periodic orbits of alternating systems", Real Analysis Exchange, Vol. 33 suppl. (31st Summer Symposium in Real Analysis, 21-25 June 2007, Trinity College, Oxford University, UK), 2007, 51-55. (ISSN: 0147-1937; scopus id: 2-s2.0-85032470932)
- 6) E. D'ANIELLO, "Approximating  $\omega$ -limit sets with periodic orbits", Real Analysis Exchange, Vol. 2006 suppl. (30th Summer Symposium in Real Analysis, 13-18 June 2006, University of North Carolina at Asheville (USA)), 107-110. (ISSN: 0147-1937)

- 7) E. D'ANIELLO, "Asymptotically stable sets and the stability of  $\omega$ -limit sets", Real Analysis Exchange, Vol. 2004 suppl. (28th Summer Symposium in Real Analysis, 8-13 June 2004, Slippery Rock University, Pennsylvania (USA)), 31-36. (ISSN: 0147-1937; scopus id: 2-s2.0-85035045504)
- 8) E. D'ANIELLO, P. DE LUCIA, "On pointwise Hölder functions", Real Analysis Exchange, Vol. 2003 suppl. (27th Summer Symposium in Real Analysis, 23-29 June 2003, Silesian University, Opava, Repubblica Ceca), 135-138. (ISSN: 0147-1937; scopus id: 2-s2.0-74849119046)
- 9) E. D'ANIELLO, "A $C^1$  function for which the  $\omega$ -limit points are not contained in the closure of the periodic points", Vol. 2002 suppl. (26th Summer Symposium in Real Analysis XXVI, 25-29 June 2002, Washington and Lee University, Lexington, Virginia (USA)), 75–80. (ISSN: 0147-1937; scopus id: 2-s2.0-85032505344)