

## Anna Maria Candela Curriculum Vitae

Born on June 1, 1967, in Putignano (Bari, Italy).

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### Work experience

- October 1, 2019 - present: **Vice Rector** (*Pro Rettore Vicario*) of *Università degli Studi di Bari Aldo Moro* (Bari, Italy)
- December 3, 2018 - present: **Full Professor** in Mathematical Analysis at *Dipartimento di Matematica* of *Università degli Studi di Bari Aldo Moro* (Bari, Italy)
- December 30, 2013: Italian National Scientific Abilitation as **Full Professor** in Mathematical Analysis
- January 1, 2004 - December 2, 2018: **Associate Professor** in Mathematical Analysis at *Dipartimento di Matematica* of *Università degli Studi di Bari Aldo Moro* (Bari, Italy)
- August 5, 1992 - July 14, 2004: **Assistant Professor** in Mathematical Analysis at *Facoltà di Scienze MM FF NN* of *Università degli Studi di Bari* (Bari, Italy)

### Education

- January 25, 1996: Ph.D. Degree in Mathematics defending a thesis in Nonlinear Analysis, supervisor Donato Fortunato
- 1991 - 1994: Ph.D. student in Mathematics at *Università degli Studi di Pisa* (Pisa, Italy)
- May 1, 1990 - October 31, 1990: postgraduate scholarship of *Consiglio Nazionale delle Ricerche* at *Scuola Normale Superiore* (Pisa, Italy), advisor Antonio Ambrosetti
- November 20, 1989: Degree in Mathematics with full marks *Cum Laude* at the *Università degli Studi di Bari* (Bari, Italy)
- July 1985: high school diploma at the Liceo Scientifico (scientific oriented high school) in Putignano (Bari, Italy)

### Languages

Italian (mother tongue), English (proficient user), French (basic user), Spanish (basic user).

October - December 2021: **Coordinator** of the GEP Team for writing the *Gender Equality Plan 2022-2024* of *Università degli Studi di Bari Aldo Moro* (D.R. n. 3350 del 11.10.2021). The *Gender Equality Plan 2022-2024* was signed by the Rector on 23.12.2021 (D.R. n. 4781).

May - December 2021: **Member**, and **Coordinator** on behalf of the Rector, of the working group on *Bilancio di Genere 2021* (Gender Report 2021) of *Università degli Studi di Bari Aldo Moro* (D.R. n. 1607 del 10.05.2021). The *Bilancio di Genere 2021* was signed by the Rector on 23.12.2021 (D.R. n. 4782).

December 22, 2020 - present: **Scientific Director** of the Framework Agreement for the Scientific Cooperation between *Università degli Studi di Bari Aldo Moro* and *Fondazione E. Amaldi* (Prot. N. 3777/III/14).

**Research activity** (last update March 05, 2022)

She is author of **61 research papers** on international journals (already published or in press), **1 chapter** on an EMS book, **2 preprints** submitted for publication on international journals and **19 proceeding papers**, with more than **400 citations** (databases *MathSciNet MR Author ID 321613*, *Web of Science Researcher ID I-6545-2012*, *Scopus Author ID 7005848392*) and **h-index 12** (see WoS).

She gave: **34 invited talks** at conferences both in Italy and abroad, **14 invited talks** at universities or research centers both in Italy and abroad, **16 short communications** both at national and international workshops.

**Visiting Professor** for short periods at the following universities or research centers: *Universidad de Granada* (Granada, Spain), *International Erwin Schrödinger Institute for Mathematical Physics* (Wien, Austria), *Peking University* (Beijing, China), *Chern Institute of Mathematics (Nankai University)*, Tianjin, China), *Università degli Studi del Salento* (Lecce, Italy), *Università degli Studi di Perugia* (Perugia, Italy), *Humboldt-Universität zu Berlin* (Berlin, Germany), *Universidad de Málaga* (Málaga, Spain), *Universidad de Sevilla* (Sevilla, Spain), *Università degli Studi di Milano – Bicocca* (Milano, Italy).

She was member of the **Scientific** and/or the **Organizing Committee** of the following workshops:

- 1) *International Workshop on “Current Trends in Nonlinear Analysis”*, dedicated to Professor Dino Fortunato on the occasion of his 60<sup>th</sup> birthday, Otranto (Italy), June 12-16, 2006 (Organizing Committee);
- 2) *IV International Meeting on Lorentzian Geometry*, Santiago de Compostela (Spain), February 5-8, 2007 (Scientific Committee);
- 3) *XVIII Congresso U.M.I.*, Bari (Italy), September 24-29, 2007 (Organizing Committee);
- 4) *International Workshop on “Variational and Topological Methods in Nonlinear Phenomena”*, Otranto (Italy), May 1-5, 2008 (Organizing Committee);
- 5) *IperBA09, XIII Incontro Nazionale Problemi di Tipo Iperbolico*, Bari (Italy), February 11-13, 2009 (Organizing Committee);
- 6) *EEMMAS, Evolution Equations and Mathematical Models in the Applied Sciences*, Taranto (Italy), June 29 – July 3, 2009 (Scientific and Organizing Committee);
- 7) *V International Meeting on Lorentzian Geometry (GeLoBa 2009)*, Martina Franca (Italy), July 8-11, 2009 (Organizing Committee);
- 8) *“Variational and Topological Methods in Nonlinear Phenomena”*, in occasion of Vieri Benci’s 60<sup>th</sup> birthday, Cortona (Italy), September 20-23, 2010 (Organizing Committee);
- 9) *VI International Meeting on Lorentzian Geometry (GeLoGra 2011)*, Granada (Spain), September 6-9, 2011 (Scientific Committee);
- 10) *International Workshop on “New Perspectives on Mathematical Models and PDEs”*, Bari (Italy), June 22, 2012 (Scientific and Organizing Committee);
- 11) *“Variational and Topological Methods in Nonlinear Phenomena”*, Dedicated to the 70<sup>th</sup> birthday of Anna Maria Micheletti and Giuliana Palmieri, Alghero (Italy), June 24-28, 2013 (Organizing Committee);
- 12) *“Appuntamento con la Matematica”*, dedicato a Giuliana Palmieri, Bari (Italy), December 6, 2013 (Scientific and Organizing Committee);
- 13) *A Nonlinear Day*, Bari (Italy), June 15, 2015 (Scientific and Organizing Committee);
- 14) *Achievements and Perspectives in Nonlinear Analysis. A tribute to Donato Fortunato*, Bari (Italy), June 14-17, 2016 (Organizing Committee);
- 15) *VIII International Meeting on Lorentzian Geometry (GeLoMa 2016)*, Málaga (Spain), September 20-23, 2016 (Scientific Committee);
- 16) *IX International Meeting on Lorentzian Geometry*, Warsaw (Poland), June 17-24, 2018 (Scientific Committee);
- 17) *Conference on Evolution Equations and PDEs, on the Occasion of the 60th Birthday of Gisèle Ruiz Goldstein*, Bari (Italy), July 13, 2018 (Scientific and Organizing Committee);
- 18) *Summer School in “Mathematical Methods in Data Science”*, Bari (Italy), July 16-20, 2018 (Scientific and Organizing Committee);
- 19) *Summer School in “Mathematical Methods in Data Science”* (2<sup>nd</sup> Edition), Bari (Italy), July 15-19, 2019 (Scientific and Organizing Committee);

- 20) *Advances and Challenges in Nonlinear Analysis ... and Beyond! On the occasion of the 70th birthday of Vieri Benci*, Bari (Italy), September 24-27, 2019 (Scientific and Organizing Committee);
- 21) *X International Meeting on Lorentzian Geometry*, Córdoba (Spain), February 1-5, 2021 (online) (Scientific Committee);
- 22) *RoMANs: Research On Mathematical Analysis ANd Semigroups. On the occasion of Silvia Romanelli's 70th Birthday*, Bari (Italy), July 8-9, 2021 (Scientific and Organizing Committee);
- 23) *International Conference on "PDEs and Semigroups in Applied Analysis" on the occasion of Jerry Goldstein's 80th birthday*, Bari (Italy), July 12-15, 2021 (Scientific and Organizing Committee);
- 24) *Recent Developments in Mathematical Analysis (ReDiMA). On the occasion of Francesco Altomare's 70th birthday*, Bari (Italy), September 23-24, 2021 (Scientific and Organizing Committee);

and, actually, she is member of the Scientific and Organizing Committee of the forthcoming schools or conferences:

- 25) *Summer School in Nonlinear Analysis*, Viterbo (Italy), June 20 - 24, 2022;
- 26) *School-Workshop on Analysis, Control & Inverse Problems for Diffusive Systems with Application to Natural and Social Sciences (ACIPDif22)*, Bari (Italy), July 18 - 22, 2022;
- 27) *Qualitative and Quantitative Aspects of Nonlinear PDEs*, Bari (Italy), September 5 - 9, 2022.

## Grants

Actually:

- **local coordinator** of the granted national research project MIUR-PRIN project 2017JPCAPN “*Qualitative and quantitative aspects of nonlinear PDEs*” (P.I. B. Sciunzi)
- **co-investigator** of the granted Spanish project “*Geometría semi-Riemanniana y flujos geométricos en Física-Matemática*”, PID2020-116126GB-I00, Ministerio de Ciencia e Innovación (P.I. M. Sánchez Caja and F. Martín Serrano)
- **co-investigator** of the granted project *Fondi di Ricerca d’Ateneo 2015/16*, supported by University Research Funds (P.I. A. Salvatore)

In the past, **Principal Investigator** of the following granted projects:

- INdAM - GNAMPA Project 2018 “*Problemi ellittici semilineari: alcune idee variazionali*”;
- INdAM - GNAMPA Project 2015 “*Metodi variazionali e topologici applicati allo studio di problemi ellittici non lineari*”.

## Editor activity

For the *Mediterranean Journal of Mathematics* (Birkhäuser, Editor-in-Chief Francesco Altomare):

- **Assistant Managing Editor** (2013 - present)
- Member of the **Editorial Board** (2010 - present)
- Member of the **Editorial Staff** (2004 - 2012).

**Associate Editor** of the journal *Boundary Value Problems* (Springer, Editor-in-Chief Kanishka Perera, Vicentiu D. Radulescu, Xianhua Tang) (2014 – present).

**Guest Editor** or **co-Editor** of the following *Special Issues*:

- *Recent Advances in Mathematical Analysis* (A.M. Candela, M. Cappelletti Montano & E. Mangino Eds.), *Trends in Mathematics* (in preparation)
- *Partial Differential Equations and Semigroups in Applied Analysis* (A.M. Candela, G. Fragnelli, G.R. Goldstein, S. Lucente, A. Rhandi & S. Romanelli Eds), *Discrete Contin. Dyn. Syst. Ser. S* (in preparation)
- *Analysis Motivated by Applications* (A.M. Candela, G. Ruiz Goldstein, J.A. Goldstein & S. Romanelli Eds), *Discrete Contin. Dyn. Syst. Ser. S* (in preparation)
- *Evolution Equations and Mathematical Models in the Applied Sciences* (S. Romanelli, A.M. Candela, R.M. Mininni, A. Pugliese & M. De Giosa Eds), *Discrete Contin. Dyn. Syst. Ser. S* **6** (2013).

**Editor** of the book “*Il Castello Aragonese di Taranto in 3D nell’evoluzione del paesaggio naturale*” (G. Mastronuzzi, L. Boccardi, A.M. Candela, C. Colella, G. Curci, F. Giletti, M. Milella, C. Pignatelli, A. Piscitelli, F. Ricci & P. Sansò Eds), DIGILABS s.a.s., Bari, 2013. ISBN 978-88-7522-047-1

**Referee** of some international journals in Mathematics.

1998 - present: *Reviewer* of the *Mathematical Reviews*, issue of the *American Mathematical Society*.

April 30, 2021 - present: *Socio Ordinario della Classe di Scienze Fisiche, Mediche, Naturali* of *Accademia Pugliese delle Scienze*

November 14, 2019 - April 29, 2021: *Socio Corrispondente della Classe di Scienze Fisiche, Mediche, Naturali* of *Accademia Pugliese delle Scienze*

Member of:

- *INdAM - G.N.A.M.P.A.*,
- *Unione Matematica Italiana*,
- *European Mathematical Society*,
- *European Women in Mathematics*.

### PhD Students:

2019 – present: **Advisor of the Ph.D. student** Caterina Sportelli (XXXV cycle)

2005 - 2007: **Advisor of the Ph.D. student** Valeria Luisi (XIX cycle, Ph.D. Degree in Mathematics got on May 18, 2007 at *Università degli Studi di Bari*).

2013 - present: Member of the **Boarding School of the Ph.D. in Computer Science and Mathematics** of her university

2005 - 2015: Member of the **Boarding School of the Ph.D. in Mathematics** of her university.

February 26, 2004: **Member of the jury** for the defence of the PhD thesis of Miguel Angel Javaloyes Victoria (*Doctorado en Matemáticas, Universidad de Murcia, Murcia, Spain*).

In 2008: **referee of the PhD thesis** of Magdalena Caballero (*Doctorado en Matemáticas, Universidad de Granada, Granada, Spagna*).

September 13, 2010 - December 15, 2010: **Scientific Advisor** of Verónica Martín Molina, Ph.D. student of the *Doctorado en Matemáticas* della *Universidad de Sevilla* (Siviglia, Spain), during her visit at the *Dipartimento di Matematica* of the *Università degli Studi di Bari Aldo Moro* (*Programa Nacional de Formación de Profesorado Universitario* n° AP2007-04195).

September 30, 2014 - October 11, 2014: **Proposer Professor** of the “Junior” Visiting Professor Nils Waterstraat, “*Dirichlet Postdoc*” of *Berlin Mathematical School at Humboldt-Universität zu Berlin* (*Programma Visitatore GNAMPA 2014-2015*).

March 12, 2018: **Member of the jury** for the defence of the PhD thesis of José Antonio Sánchez Pelegrín (*Doctorado en Matemáticas, Universidad de Granada, Granada, Spain*).

In 2020: **referee of the PhD thesis** of Giulio Colombo (Dottorato in Scienze Matematiche, *Università degli Studi di Milano*).

**Advisor of** some degree thesis of students in *Mathematics* both of first level and of second level degree and of some first level degree thesis in *Science and Technical Nautical Management*.

**Member** of the some **Selection Boards** for positions as Associate Professor or Researcher in Italian universities.

### Teaching experience

At the School of the Ph.D. in Computer Science and Mathematics of her university, she gave the following courses:

- *Finsler Geometry and Spacetimes*, in cooperation with Miguel Angel Javaloyes Victoria (a.y. 2020/21)
- *Elements of Calculus of Variations with Applications to the Study of Geodesics* (a.y. 2010/11, 2012/13, 2014/15, 2015/16, 2017/18, 2018/19).

She gave two mini courses to PhD and/or Master students during some *Erasmus Teaching Staff Mobilities*:

- *Variational tools and geodesics*, invited by Miguel Sánchez at *Universidad de Granada* (September 2014)
- *Variational and topological methods applied to Differential Geometry*, invited by María Angustias Cañadas Pinedo at *Universidad de Málaga* (May 2016).

February 23, 2022: **Lecturer** for the 2-hour lesson “*Gender Equality Plan*”, PhD Seminars a.y. 2021/22 on *Promozione della ricerca/Project Management*, open to all the PhD students of her university.

In the a.y. 2021/2022, she is giving the following courses:

- *Analisi Superiore 2* (Advanced Mathematical Analysis) at the second level degree in Mathematics,
- *Fondamenti di Matematica per la Data Science* (Principles of Mathematics for Data Science) at the second level degree in Data Science,
- *Analisi Matematica n.3* (Mathematical Analysis no. 3) at the first level degree in Mathematics,
- *Analisi Matematica n.4* (Mathematical Analysis no. 4) at the first level degree in Mathematics.

Furthermore, she has an intense activity in the popularization of Mathematics at different levels, mainly giving lectures for high school students, undergraduates in scientific faculties and older people attending universities of the third age.

### **Research Field**

Variational and Topological Methods applied to the study of Nonlinear Differential Equations.

### **Research Topics**

Geodesics and trajectories in semi-Riemannian manifolds; elliptic equations in open bounded domains of  $\mathbb{R}^N$  with either homogeneous or nonhomogeneous boundary conditions; elliptic equations in unbounded domains of  $\mathbb{R}^N$ ; semi-linear elliptic problems of p-Laplacian type both in bounded and unbounded domains; existence and multiplicity theorems for unbounded functionals in Banach spaces.

**Anna Maria Candela**  
**Publications**

**Articles**

- [1] A.M. Candela and C. Sportelli, Multiple solutions for coupled gradient-type quasilinear elliptic systems with supercritical growth, *Ann. Mat. Pura Appl.* (in press).
- [2] A.M. Candela and C. Sportelli, Nontrivial solutions for a class of gradient-type quasilinear elliptic systems, *Topol. Meth. Nonlin. Anal.* (in press).
- [3] A.M. Candela, A. Salvatore and C. Sportelli, Existence and multiplicity results for a class of coupled quasilinear elliptic systems of gradient type, *Adv. Nonlinear Stud.* **21** (2021), 461-488.  
DOI:10.1515/ans-2021-2121
- [4] A.M. Candela, G. Fragnelli and D. Mugnai, Quasilinear problems without the Ambrosetti-Rabinowitz condition, *Minimax Theory Appl.* **6** (2021), 239-250.
- [5] A.M. Candela and A. Salvatore, Existence of minimizers for some quasilinear elliptic problems, *Discrete Contin. Dyn. Syst. Ser. S* **13** (12) (2020), 3335-3345. DOI:10.3934/dcdss.2020241
- [6] A.M. Candela and A. Salvatore, Positive solutions for a generalized p-Laplacian type problem, *Discrete Contin. Dyn. Syst. Ser. S* **13** (7) (2020), 1935-1945. DOI:10.3934/dcdss.2020151
- [7] A.M. Candela and A. Salvatore, Existence of radial bounded solutions for some quasilinear elliptic equations in  $\mathbb{R}^N$ , *Nonlinear Analysis* **191** (2020), 111625 (26 pages). DOI: 10.1016/j.na.2019.111625
- [8] A.M. Candela, G. Palmieri and A. Salvatore, Multiple solutions for some symmetric supercritical problems, *Commun. Contemp. Math.* **22** (2020), Article 1950075 (20 pages).  
DOI:10.1142/S0219199719500755
- [9] A.M. Candela and A. Salvatore, Infinitely many solutions for some nonlinear supercritical problems with break of symmetry, *Opuscula Math.* **39** (2019), pp. 175-194.  
DOI:10.7494/OpMath.2019.39.2.175
- [10] A.M. Candela, G. Palmieri and A. Salvatore, Infinitely many solutions for quasilinear elliptic equations with lack of symmetry, *Nonlinear Anal.* **172** (2018), pp. 141-162.  
DOI:10.1016/j.na.2018.02.011
- [11] A.M. Candela and N. Waterstraat, Bifurcation of critical points along gap-continuous families of subspaces, *J. Fixed Point Theory Appl.* **19** (2017), pp. 3053-3068. DOI:10.1007/s11784-017-0468-3
- [12] A.M. Candela and G. Palmieri, A multiplicity result for a generalized p-Laplacian type problem with asymptotically p-linear terms, *Calc. Var. Partial Differential Equations* (2017), **56**:72 (39 pages).  
DOI:10.1007/s00526-017-1170-4
- [13] R. Bartolo, A.M. Candela and J.L. Flores, Connectivity by geodesics on globally hyperbolic spacetimes with a lightlike Killing vector field, *Rev. Mat. Iberoam.* **33** (2017), pp. 1-28.  
DOI:10.4171/rmi/926
- [14] R. Bartolo, A.M. Candela and A. Salvatore, On a class of superlinear (p,q)-Laplacian type equations on  $\mathbb{R}^N$ , *J. Math. Anal. Appl.* **438** (2016), pp. 29-41. DOI:10.1016/j.jmaa.2016.01.049
- [15] R. Bartolo, A.M. Candela and A. Salvatore, Multiplicity results for a class of asymptotically p-linear equations on  $\mathbb{R}^N$ , *Commun. Contemp. Math.* **18** (2016), 1550031 (24 pages).  
DOI:10.1142/S0219199715500315
- [16] R. Bartolo, A.M. Candela and J.L. Flores, Connectivity by geodesics in open subsets of globally hyperbolic spacetimes, *Int. J. Geom. Methods Mod. Phys.* **12** (2015) 1560009 (9 pages).  
DOI:10.1142/S0219887815600099
- [17] A.M. Candela, G. Palmieri and K. Perera, Multiple solutions for p-Laplacian type problems with asymptotically p-linear terms via a cohomological index theory, *J. Differential Equations* **259** (2015), pp. 235-263. DOI:10.1016/j.jde.2015.02.007
- [18] R. Bartolo, A.M. Candela and A. Salvatore, Perturbed asymptotically linear problems, *Ann. Mat. Pura Appl.* **193** (2014), pp. 89-101. DOI:10.1007/s10231-012-0267-9
- [19] R. Bartolo, A.M. Candela and A. Salvatore, p-Laplacian problems with nonlinearities interacting with the spectrum, *NoDEA Nonlinear Differential Equations Appl.* **20** (2013), pp. 1701-1721.  
DOI:10.1007/s00030-013-0226-1
- [20] A.M. Candela, A. Romero and M. Sánchez, Completeness of trajectories of relativistic particles under stationary magnetic fields, *Int. J. Geom. Methods Mod. Phys.* **10** (2013), 1360007 (8 pages).

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- [21] A.M. Candela, A. Romero and M. Sánchez, Completeness of the trajectories of particles coupled to a general force field, *Arch. Ration. Mech. Anal.* **208** (2013), pp. 255-274.  
DOI:10.1007/s00205-012-0596-2
- [22] A.M. Candela and G. Palmieri, Multiplicity results for some quasilinear equations in lack of symmetry, *Adv. Nonlinear Anal.* **1** (2012), pp. 121-157. DOI:10.1515/anona-2011-0005
- [23] R. Bartolo, A.M. Candela and J.L. Flores, A note on geodesic connectedness in Gödel type spacetimes, *Differential Geom. Appl.* **29** (2011), pp. 779-786. DOI:10.1016/j.difgeo.2011.08.006
- [24] A.M. Candela and A. Salvatore, Elliptic systems in unbounded domains, *Complex Var. Elliptic Equ.* **56** (2011), pp. 1143-1153. DOI:10.1080/17476933.2010.487213
- [25] R. Bartolo, A.M. Candela and E. Caponio, Normal geodesics connecting two submanifolds in a stationary spacetime, *Adv. Nonlinear Stud.* **10** (2010), pp. 851-866.
- [26] A.M. Candela, E. Medeiros, G. Palmieri and K. Perera, Weak solutions of quasilinear elliptic systems via a cohomological index, *Topol. Methods Nonlinear Anal.* **36** (2010), pp. 1-18.
- [27] A.M. Candela, G. Palmieri and K. Perera, Nontrivial solutions of some quasilinear problems via a cohomological local splitting, *Nonlinear Anal.* **73** (2010), pp. 2001-2009.  
DOI:10.1016/j.na.2010.05.029
- [28] A.M. Candela, G. Cerami and G. Palmieri, On some nonhomogeneous elliptic problems in unbounded domains, *Adv. Nonlinear Stud.* **9** (2009), pp. 625-637.
- [29] A.M. Candela and G. Palmieri, Infinitely many solutions of some nonlinear variational equations, *Calc. Var. Partial Differential Equations* **34** (2009), pp. 495-530.  
DOI:10.1007/s00526-008-0193-2
- [30] R. Bartolo and A.M. Candela, Normal trajectories in stationary spacetimes under the action of an external field with quadratic asymptotic behavior, *Extracta Math.* **23** (2008), pp. 243-253.
- [31] A.M. Candela, J.L. Flores and M. Sánchez, Global hyperbolicity and Palais-Smale condition for action functionals in stationary spacetimes, *Adv. Math.* **218** (2008), pp. 515-536.  
DOI:10.1016/j.aim.2008.01.004
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- [34] A.M. Candela and G. Palmieri, Multiple solutions of some nonlinear variational problems, *Adv. Nonlinear Stud.* **6** (2006), pp. 269-286.
- [35] A.M. Candela, G. Palmieri and A. Salvatore, Radial solutions of semilinear elliptic equations with broken symmetry, *Topol. Methods Nonlinear Anal.* **27** (2006), pp. 117-132.
- [36] R. Bartolo, A.M. Candela, J.L. Flores and A. Salvatore, Periodic orbits on Riemannian manifolds under the action of an at most quadratic potential, *Differential Geom. Appl.* **24** (2006), pp. 108-118.
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- [39] R. Bartolo and A.M. Candela, Quadratic Bolza problems in static spacetimes with critical asymptotic behavior, *Mediterr. J. Math.* **2** (2005), pp. 459-470.
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- [42] A.M. Candela, J.L. Flores and M. Sánchez, A quadratic Bolza-type problem in a Riemannian manifold, *J. Differential Equations* **193** (2003), pp. 196-211.
- [43] A.M. Candela, J.L. Flores and M. Sánchez, On General Plane Fronted Waves. Geodesics, *Gen. Relativity Gravitation* **35** (2003), pp. 631-649.
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- [45] A.M. Candela, A. Salvatore and M. Squassina, Semilinear elliptic systems with lack of symmetry, *Dynam. Contin. Discrete Impuls. Systems A* **10** (2003), pp. 181-192.

- [46] A.M. Candela, A. Salvatore and M. Sánchez, Periodic trajectories in Gödel type Space-Times, *Nonlinear Anal.* **51** (2002), pp. 607-631.
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- [48] A.M. Candela, A. Salvatore and M. Squassina, Multiple solutions for semilinear elliptic systems with non-homogeneous boundary conditions, *Nonlinear Anal.* **51** (2002), pp. 249-270.
- [49] A.M. Candela and M. Sánchez, Existence of geodesics in Gödel type Space-Times, *Nonlinear Anal.* **47** (2001), pp. 1581-1592.
- [50] A.M. Candela and A. Salvatore, Closed geodesics in stationary manifolds with strictly convex boundary, *Differential Geom. Appl.* **13** (2000), pp. 251-266.
- [51] A.M. Candela, A. Masiello and A. Salvatore, Existence and multiplicity of normal geodesics in Lorentzian manifolds, *J. Geom. Anal.* **10** (2000), pp. 623-651.
- [52] A.M. Candela and M. Sánchez, Geodesic connectedness in Gödel type Space-Times, *Differential Geom. Appl.* **12** (2000), pp. 105-120.
- [53] A.M. Candela, F. Giannoni and A. Masiello, Multiple critical points for indefinite functionals and applications, *J. Differential Equations* **155** (1999), pp. 203-230.
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