

SHORT CURRICULUM OF MARIA ALESSANDRA RAGUSA

Degree in Mathematics on July 12th **1988**, 110/110 cum laude.

-In **1989** she became Teaching Assistant in Mathematical Analysis in Faculty of Engineering of Catania University. In January 1990 she supports the entrance examination to the doctoral program Research in Mathematics, V cycle, at Catania University, resulting among the winners.

-In **December 1992** she won a competition exam for Assistant Professor of Mathematical Analysis in Catania University.

- In **June 18th 2012** PhD in Mathematics in Luleå University (Sweden).

- In **January 2000** she won a competition exam for Associate Professor of Mathematical Analysis in Catania.

- In **June 2013** she obtained the national scientific qualification for Full Professor of Mathematical Analysis.

- In **October 2017** she becomes Full Professor of Mathematical Analysis in Catania University.

Is member of the international association "Women in Mathematics".

Winner of the "Una Tantum" of Catania University, incentive award for academic and scientific merit.

Responsible of research projects

-Responsible of National Research Projects, in 2009, 2011 and 2017, 2018, 2019 of "Gruppo Nazionale per la Analisi Matematica, la Probabilità e le loro Applicazioni (GNAMPA) - Istituto Nazionale di Alta Matematica" - Rome, Italy.

- Responsible of project "Research in Pairs" of Centro di Ricerca Matematica "Ennio De Giorgi"-Scuola Normale Superiore 2015.

-Responsible of 9 "International ERASMUS Accord" between University of Catania and: Université de Limoges, France, 2010-13 and 2014-2020, Okan University di Istanbul, Turkey, 2011-14 and 2014-20, Kirsehir University, Turkey, 2011-14 and 2014-20, Luleå University, Sweden, 2014-20, Karlstad University, Sweden, 2014-20, Narvik University, Norway, 2014-20.

Participation to research projects

-Participant to the "Programs of Relevant Scientific National Interest (PRIN)" PRIN 1997, PRIN 1999, PRIN 2003, PRIN 2006 and PRIN 2008, 2017 duration 2 years.

-Participant to the "Fund for Investment in Basic Research (FIRB)", duration 2 years, title: "Analisi di equazioni a derivate parziali, lineari e non lineari: aspetti metodologici, modellistica, applicazioni".

-Participant to the "Research Projects financed with funds of the University (PRA)" 1999, PRA 2000, PRA 2001, PRA 2002, PRA 2003, PRA 2004, PRA 2005, PRA 2008 e PRA 2009, "Piano triennale 2016-2019", "ENIGMA"-Egocentric Navigator for Industrial Guidance, Monitoring and Anticipation, n. F/190050/02/X44 2020, "GNAMPA" 2020, "PIACERI" 2020.

Governance activities

- Member of 4 Commissions of competition exams
 - 1) Assistant professor in Naples University in 2000,
 - 2) Associate professor in Salerno University in 2004,
 - 3) Associate professor in Naples University in 2006,
 - 4) Assistant professor in Naples-”Parthenope” University in 2008,
 - 5) Associate professor in Modena-Reggio Emilia University in 2018,
 - 6) Associate professor in Naples University in 2018,
 - 7) Assistant professor in Naples University in 2018,
 - 8) Associate professor in Sassari University in 2019,
 - 9) Full professor in King Saud University in 2019.
 - 10) Full professor in King Saud University in 2020.
 - 11) Full professor in Tafila Technical University, Jordan in 2020
 - 12) Associate professor in Education University of Hong Kong in 2020.
 - 13) Associate professor in Tafila Technical University, Jordan in 2020
- Member of the College of the PhD in Applied Mathematics for Engineering in Catania University, cycles XIX, XX XXI, XXII, XXXIV, XXXV, XXXVI and teacher of the course ”Partial Differential Equations”.
 - Member of the Education Committee of the Council of Course Study in Science and Technology of the Environment.
 - Member of the Education Committee of the Council of the Programme in Environmental Sciences.
 - Delegate of the Board of the Programme in Environmental Sciences at the Education Committee of the Faculty of Mathematical, Physical and Natural Sciences in Catania University.
 - Delegate of the Board of the Master Degree Programme in Sciences and Technologies of the Environment to the Education Committee of the Faculty of Mathematical, Physical and Natural Sciences, Catania University.
 - Referent for Catania of ”Unione Matematica Italiana”.
 - Member of ”Gioenia Academy”,
 - Inserted from 2013 in the National Register of Expert Assessors of the National Agency of Evaluation of University and Research (A.N.V.U.R.).
 - Inserted in 2015 in the National Register of Experts of Evaluation of the ”Third mission” (teaching of mathematics in schools) of A.N.V.U.R.
 - In 2016 is nominated by A.N.V.U.R. member of evaluation of newly established Master Degree Courses.
 - Inserted in 2017 by A.N.V.U.R. in the Register of ”Experts of System” for Institutional Quality Assurance.
 - In 2018 is appointed by A.N.V.U.R. President of the Evaluation Expert (C.E.V.) mission for the initial accreditation and Member of Commission of the Evaluation Expert (C.E.V.) of periodic accreditation of bachelor and master degree courses of new activation.
 - **In 2020 is appointed by National Center of Scientific and Technical Evaluation (NCSTE) in Kazakhstan for assessing international grant projects.**

- Vice Dean of the Faculty of Mathematical, Physical and Natural Sciences of Catania University, from 2009 to 2012.
- Elected President of the Master Degree Course (Science for the Protection of the Environment), Catania University from 2012.
- Elected Director of C.U.T.G.A.N.A. Research Centre inter - Catania University, 2013 (University Centre for the Protection and Management of Natural Environments and Agro-ecosystems).
- Member proposed of "Centro di Matematica per la Tecnologia Angelo Marcello Anile" (D.R. n.557, 18/2/2016).
- Member proposed of "Centro interdipartimentale di ricerca per il community engagement (CURE)" of the University of Catania.
- Member of the international committee for PhD in Mathematics in the University of Karlstad (Sweden), on february 10th, 2017.
- Member of the international committee for "Doctorate en Physique" in the Cergy Paris Université (French), october 2020.
- Member of the international committee for PhD in Mathematics and Applications in the Université Sidi Mohamed Ben Abdellah, Fés (Morocco), march 6th, 2021.
- Supervisor of PostDoc research fellowships.
- Supervisor of Ph.D. theses, master theses and University theses.
- From october 2017 to july 2nd 2019 is Delegate of the Rector for the Internationalization in scientific field.

Conferences and invited lectures

Held, approximately, 100 scientific communications and invited lectures at national and international conferences.

Has given seminars in universities of many countries, only as an example:

- of "Mittag-Leffler" Institute,
- guest research groups in Bari, Bologna, Cagliari, Messina, Milano, Modena, Napoli, Reggio Calabria, Roma, Trieste,
- guest invitation during intensive semesters in Istituto Nazionale di Alta Matematica (I.N.D.A.M.), Rome,
- since 2003 regular guest of "Scuola Normale Superiore" of Pisa (IT),
- of "Newton Institute" of Cambridge (UK),
- of Tokyo University of Science,
- of Florida Institute of Technology of Miami, USA
- of Department of Mathematics, Quy-Nhon University, Vietnam,
- of Universidad of Costa Rica, San José, Costa Rica,
- of Research Melbourne Institute of Technology, Melbourne,
- of Department of Mathematics, Harvard University.

Organizing national and international conferences

- Member of the "Conference Secretariat" of International conference: "Boundary value problems for elliptic and parabolic operators, in memories of Filippo Chiarenza", held in Catania, November 12-14, 1998.

- Organizer of the session "Linear Partial Differential Equations" to International conference " Eleventh International Colloquium on Differential Equations " held in Plovdiv, August 18-23, 2000.
- Organizer, together with prof. Michele Frasca, of the national congress financed by the Ministry of University and of Scientific and Technological Research, entitled: "Symmetries, Geometric Structures, Evolution and Memory in PDEs ", Taormina, February 7-9, 2001.
- Organizer, with prof. Sandro Salsa, Michele Frasca and Raul Serapioni, of the international conference "Fabes - Chiarenza Lectures 2002" held in Syracuse (Italy), December 2-4, 2002.
- Organizer, with prof. Rosalba Di Vincenzo, Giuseppe Santagati and Alfonso Villani, of the conference "Differential Equation Theory and partial control " Catania, May 3rd, 2003.
- Organizer, with prof. Patrizia Daniele, Maria Stella Fanciullo, Michele Frasca, Mario Marino and Giorgio Talenti of the conference financed by PRIN 2003: "Differential Equations Partial methodological aspects, modeling, applications " Ragusa, June 29th - July 2nd, 2005.
- Organizer, together with prof. Annamaria Barbagallo, of "Mini Symposium on Variational Inequalities and Equilibrium Problems" at the international conference " International Conference of Numerical Analysis and Applied Mathematics 2009 (ICNAAM 2010)" Rhodes (Greece), September 19-25, 2010.
- Organizer, with prof. Annamaria Barbagallo, of the International Conference of Numerical Analysis and Applied Mathematics 2011 (ICNAAM 2011) "the section entitled" 3rd symposium on variational inequalities and equilibrium problems ", Halkidiki (Greece), september 19-25, 2011.
- Organizer, with prof. Sorina Barza and Lars-Erik Persson, during "International Conference of the Theory, Methods and Applications on Non-linear Equations " of the session " Operator Theory: Advances and Applications ", Texas A.M. University, Kingsville (USA), december 17-21, 2012.
- Organizer, with prof. Giuseppe Di Fazio, Maria Stella Fanciullo e Salvatore Angelo Marano the conference:" Existence, Regularity and A Priori Bounds for Differential Problems - on the occasion of the 70th birthday of Mario Marino, " Catania May 3-4, 2013.
- Organizer, with prof. Annamaria Barbagallo, during " International Conference of Numerical Analysis and Applied Mathematics 2013 (ICNAAM 2013) " the "4th symposium on variational inequalities and equilibrium problems", Rhodes (Greece) september 19-25, 2013.
- Member of the Scientific Committee of the International Conference: "The 2014 International Conference on Pure Mathematics - Applied Mathematics", Venice, March 2014.
- Organizer, with prof. Annamaria Barbagallo, the Mini-symposium: "Variational inequalities, immune systems and local minimizers of functionals", during "SIMAI 2014, Conference on Applied and Industrial Mathematics", Taormina, July 7-10, 2014.
- Organizer, with prof. Sorina Barza, Annette Meidell and Natasha Samko, during the "World Congress: 10th International Conference on Ma-

thematical Problems in Engineering, Aerospace and Sciences”, the section dedicated to Professor Lars-Erik Persson, entitled ”Function Spaces, Interpolation Theory, Fourier Analysis, PDE, Inequalities, Homogenization Theory and Applications”, Narvik University, Narvik (Norway), July 15– 18, 2014.

- Member of the Global Scientific Committee of the ”Ninth International Conference on Differential Equations and Dynamic Systems” and organizes with prof. Tingxiu Lu (Texas A.M. University-Commerce, USA), the section entitled ”Differential and Integral Inequalities”, Dallas (Texas, USA), May 14–16, 2015.

-Organizer, with prof. Annamaria Barbagallo and Lina Mallozzi of the section ”Variational Methods in Nonlinear Problems” during the ”9th European Conference on Elliptic and Parabolic Problems”, Gaeta (Italy) from May 23 to 27, 2016.

-Organizer, with prof. Giuseppe Di Fazio and Piero Zamboni, of the ”Workshop of Mathematical Analysis, in memory of Filippo Chiarenza”, Catania, June 14th 2016.

-Organizer, with prof. Annamaria Barbagallo and Sorina Barza, during ”11th AIMS Conference on Dynamical Systems, Differential Equations and Applications”, of the section ”Function Spaces and Inequalities”, Orlando (USA) July 1-5 2016.

- Organizer, with prof. Lars-Erik Persson and Natasha Samko, of the ”Mini-Symposium on Functional Analysis and Related Topics with Applications”, during the ”World Congress: 11th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences”, Université Le Rochelle (France), July 5– 7, 2016.

- Organizer, with prof. Annamaria Barbagallo and Dr. Andrea Scapellato, during the International Conference of Numerical Analysis and Applied Mathematics 2011 (ICNAAM 2016) ”the section entitled” 4th symposium on variational inequalities and equilibrium problems ”, Rhodes (Greece), September 19-25, 2016.

- Organizer, with prof. Annamaria Barbagallo and Dr. Andrea Scapellato, during the ”International Conference on Elliptic and Parabolic Problems” the section entitled ”Variational Analysis for Nonlinear Phenomena”, Gaeta, May, 22–26, 2017.

- Organizer, with prof. Annamaria Barbagallo and Dr. Andrea Scapellato, during the ”12th AIMS Conference on Dynamical Systems, Differential Equations and Applications” the section: ”Analytic approaches on qualitative properties of solutions of PDE”, Taipei, Taiwan, July, 5–9, 2018.

- Organizer, with prof. Annamaria Barbagallo and Dr. Andrea Scapellato, during the ”10th European Conference on Elliptic and Parabolic Problems” the section entitled ”Variational Analysis for Nonlinear Phenomena”, Gaeta, May, 20–24, 2019.

- Member, with proff. Mario Villalobos Arias, Pedro Mendez Hernandez, Marcela Alfaro Cordoba, Paola Boito and Joaquin Rivera, of the Scientific Committee of ”XXII SIMMAC, Simposio Internacional de Métodos Matemáticos Aplicados a las Ciencias”, Universidad de Costa Rica in San José (Costa Rica), February, 25 - 28, 2020 .

- Organizer, with prof. Giuseppe Di Fazio, Maria Stella Fanciullo, Rosa Maria Pidotella, Pietro Zamboni, of the "International Conference in Memory of Filippo Chiarenza - Degenerate Elliptic Operators and Applications", Catania, november, 12th, 2021.

Activities in national and international journals

- Editor in Chief of "Journal of Function Spaces", published by Hindawi (Q 1 class journal).

- Editor in Chief of "Journal of Mathematics Research", published by Canadian Center of Science and Education.

-Editor, in cooperation with Sorina Barza, Lead Guest Editor Lars-Erik Persson, of a special volume of "Journal of Inequalities and Applications", ed. Springer. 2015.

-Is member of the Editorial Board of the following international journals:

- "Advances in Nonlinear Analysis",
- "Australian Journal of Mathematical Analysis and Applications",

Publications

1) *Commutators and Morrey Spaces* (in coll. G. Di Fazio), **Bollettino Unione Matematica Italiana**, serie VII (V) - A, n.3 323–332, (1991).

2) *Interior estimates in Morrey spaces for strong solutions to non divergence form equations with discontinuous coefficients* (in coll. G. Di Fazio), **Journal of Functional Analysis**, **112**(2) 241–256, (1993).

3) *Interior estimates for strong solutions in Morrey Spaces for elliptic equations*, **Proceedings of XIV Congresso U.M.I.** (1991).

4) *A new approach to some trace theorems*, **Le Matematiche**, XLVIII Fasc II, 323–330, (1993).

5) *Regularity for weak solutions to the Dirichlet problem in Morrey space*, **Rivista Mat. Univ. Parma**, (5) **3** 355–369, (1994).

6) *Continuitá delle soluzioni di equazioni ellittiche quasilineari*, **Proceedings of XV Congresso U.M.I.** (1995).

7) *An Adams' type inequality* (in coll. P. Zamboni), **Comptes Rendus de l'Acad. Bulg. des Sciences**, 50 (4), 13–16, (1997).

8) *On Morrey's regularity of strong solutions to elliptic boundary value problems* (in coll. G. Di Fazio, D.K. Palagachev), **Comptes Rendus de l'Academie Bulg. des Sciences**, tome 50 (7), 11–14, (1997).

9) *Dirichlet Problem in Morrey Spaces for elliptic equations in non divergence form with VMO coefficients*, **Proceedings of the Eighth International Colloquium on Differential Equations**, 385–390, (1998).

10) *Sobolev-Morrey spaces related to an ultraparabolic equation* (in coll. S. Polidoro), **Manuscripta Mathematica**, 96, 371–392, (1998).

11) *Regularity of solutions of divergence form elliptic equations*, **Proceedings of the American Mathematical Society**, 128 (2), 533–540, (1999).

- 12) *Oblique derivative problem in Morrey spaces* (in coll. D. K. Palagachev) **Proceedings of the Nineth International Colloquium on Differential Equations**, 307–310, (1999).
- 13) *Regularity of the first derivatives of the solutions of a class of linear elliptic equations of second order with discontinuous coefficients* **Proceedings of the Nineth International Colloquium on Differential Equations**, 337–342, (1999).
- 14) *Global Morrey regularity of strong solutions to Dirichlet problem for elliptic equations with discontinuous coefficients* (in coll. G. Di Fazio, D.K. Palagachev), **Journal of Functional Analysis**, 166, 179–196, (1999).
- 15) *Local regularity of solutions to quasilinear elliptic equations with general structure* (in coll. P. Zanboni), **Communications in Applied Analysis**, 3 (1), 131–147, (1999).
- 16) *Solvability of the Dirichlet problem in $H_0^{1,p,\lambda}(\Omega)$ for a class of linear second order elliptic partial differential equations*, **Proceedings of EQUADIFF99**, 1, 609–611, (1999).
- 17) *On the L^p –estimates for the weak solution of divergence form elliptic equations*, **Int. Journal of Differential Equations and Applications**, 1A (2), 165–172, (2000).
- 18) *Elliptic boundary value problem in vanishing mean oscillation hypothesis*, **Commentationes Mathematicae Universitatis Carolinae**, 40, (4), 651–663, (1999).
- 19) *$C^{(0,\alpha)}$ –regularity of the solution of the Dirichlet problem for elliptic equations in divergence form*, **Int. Journal of Differential Equations and Applications**, 1 (1), 113–125, (2000).
- 20) *Regular oblique derivative problem in Morrey spaces* (in coll. D.K. Palagachev, L. Softova), **Electr. Journal of Differential Equations**, n.39,1–17, (2000)
<http://www.emis.de/journals/EJDE/Volumes/2000/39>.
- 21) *Regularity theory associated to operators with non euclidean geometry*, **International Journal of Differential Equations and Applications**, 3 (4), 459–466, (2001).
- 22) *A potential theoretic inequality* (in coll. P. Zanboni), **Czechoslovak Mathematical Journal**, 51 (126), 55–65, (2001).
- 23) *Hölder regularity for solutions of ultraparabolic equations in divergence form*, (in coll. S. Polidoro), **Potential Analysis**, 14, 341–350, (2001).
- 24) *Stime interne per equazioni ultraparaboliche in forma di divergenza*, **Proceedings of XVI Congresso U.M.I.**, (1999).
- 25) *On weak solutions of ultraparabolic equations*, **Nonlinear Analysis**, 47, 503–511, (2001).
- 26) *Boundary value problems for uniformly elliptic operators*, **Applicable Mathematics, Its Perspectives and Challenges**, 82–87, (2001).
- 27) *Istituzioni di Analisi Superiore*, (book in coll. G. Santagati), ed. Spazio Libri (2001).
- 28) *A Green function and regularity results for an ultraparabolic equation with a singular potential* (in coll. S. Polidoro), **Advances in Differential Equations**, 7 (2002), 1281–1314, (2002).

- 29) *Local hölder regularity for solutions of elliptic system*, **Duke Mathematical Journal**, **113** (2), (2002).
- 30) *Parabolic systems with non continuous coefficients*, **Discrete and Continuous Dynamical Systems**, 727–733, (2002).
- 31) *Cauchy-Dirichlet problem in Morrey spaces for parabolic equations with discontinuous coefficients* (in coll. D.K. Palagachev, L. Softova), **Bollettino Unione Matematica Italiana** (8) 6-B, 667–683, (2003).
- 32) *Alcuni contributi allo studio di equazioni paraboliche di tipo variazionale*, **Proceedings of XVII Congresso U.M.I.**, (2003).
- 33) *Interior estimates in Campanato spaces related to quadratic functionals* (in coll. A. Tachikawa), **Proceedings of Research Institute of Mathematical Sciences, Kyoto**, 54–65, (2004).
- 34) *Cauchy-Dirichlet problem associated to divergence form parabolic equations*, **Communications in Contemporary Mathematics**, 6 (3), 377–393, (2004).
- 35) *Quasilinear equations with discontinuous coefficients*, **Communications in Applied Analysis**, 9, 337–341 (2005).
- 36) *Hölder regularity results for solutions of parabolic equations*, **Journal of Global Optimization**, 79 (2005) 921–934, (2005).
- 37) *Partial regularity of the minimizers for quadratic functionals with VMO coefficients* (in coll. A. Tachikawa), **London Mathematical Society**, 72 (3), 609–620, (2005).
- 38) *The Cauchy-Dirichlet problem for parabolic equations with VMO coefficients*, **Mathematical and Computer Modelling**, 42, 1245–1254, (2005).
- 39) *On continuity of minimizers for certain quadratic growth functionals* (in coll. A. Tachikawa), **Journal of Mathematical Society of Japan**, 57 (3), 691–700, (2005).
- 40) *On some Schrödinger type equations*, **Proceedings of the 5th ISAAC Congress**, World Scientific, 729–736, (2005).
- 41) *Trends and topics on some partial differential equations and systems*, **Le Matematiche** 60 (II), 447–456, (2005).
- 42) *On sets of zero Hausdorff s -dimensional measure*, **Proceedings of the Conference on Differential and Difference Equations and Applications**, Hindawi Publishing Corporation, 963–968, (2006).
- 43) *Continuity of the derivatives of solutions related to elliptic equations*, **Proceedings of the Royal Society of Edinburgh**, 136 (A), 1027–1039, (2006).
- 44) *Solvability of a Dirichlet problem for divergence form parabolic equations*, **Journal of Nonlinear and Convex Analysis**, 7 (3), 515–524, (2006).
- 45) *On certain regularity properties*, **Bollettino della Accademia Gioenia**, 39 (366), 201–206, (2008).
- 46) *On positive solutions of hypoelliptic second order differential equations*, **Lecture Notes of Seminario Interdisciplinare di Matematica**, 6, 209–216, (2007).

- 47) *Linear growth coefficients in quasilinear equations*, **Nonlinear Differential Equations and Applications**, 13, 605–617, (2007).
- 48) *Su una classe di problemi ellittici non lineari*, **Proceedings of XVIII Congresso U.M.I.**, (2007).
- 49) *Commutators of fractional integral operators in Vanishing-Morrey Spaces*, **Journal of Global Optimization**, 40 (1), 361–368, (2008).
- 50) *Regularity of the minimizers of some variational integrals* (in coll. with A. Tachikawa), **Zeitschrift für Analysis und ihre Anwendungen**, 27 (4), 469–482, (2008).
- 51) *Harnack inequality for hypoelliptic ultraparabolic equations with a singular lower order term* (in coll. S. Polidoro) **Revista Mathematica Iberoamericana**, 24 (3), 1011–1046, (2008).
- 52) *Homogeneous Herz spaces and regularity results*, **Nonlinear Analysis Series A: Theory, Methods and Applications** 71, 1–6, (2009).
- 53) *Recent advances in Homogeneous Herz spaces and PDE's*, **American Institute of Physics Inc.**, T. Simos, G. Psihoyios; Ch. Tsitouras; (Eds.), 2 1492–1495, (2009).
- 54) *On a class of derivatives of some vector-valued minimizers*, **CIRO'10 The Fifth International Conference on Operations Research, Marrakech**, (2010).
- 55) *Estimates of the derivatives of minimizers of a special class of variational integral* (in coll. A. Tachikawa), **Discrete and Continuous Dynamical Systems**, 31 (3), 1411–1425, (2011).
- 56) *A new regularity criterion for the nematic liquid crystal flows*, (in coll. S. Gala, Q. Liu), **Applicable Analysis** 1–7, (2011).
- 57) *Immune system network and cancer vaccine* (in coll. C. Bianca, M. Pennisi, S. Motta), **Proceedings of the International Conference on Numerical Analysis and Applied Mathematics**, T. Simos, G. Psihoyios; Ch. Tsitouras Eds., (2011).
- 58) *Metodi e modelli matematici* (book in coll. S. Motta), ed. CULC, (2011).
- 59) *Metodi e modelli matematici- Esercizi e Complementi* (book in coll. S. Motta, A. Scapellato), ed. CULC, (2013).
- 60) *Interpolation inequalities for weak solutions nonlinear parabolic systems* (in coll. G. Floridia), **Journal of Inequalities and Applications** 42, (2011).
- 61) *Differentiability and partial Holder continuity of solutions of nonlinear elliptic systems* (in coll. G. Floridia), **Journal of Convex Analysis** I (19), (2012).
- 62) *Regolarità per i flussi di cristalli liquidi nematici*, (in coll. S. Gala, Q. Liu) **Proceedings of XIX Congresso U.M.I.**, (2011).
- 63) *Parabolic Herz spaces and their applications*, **Applied Mathematical Letters**, 25 (10), 1270–1273, (2012).
- 64) *Embeddings for Morrey-Lorentz Spaces*, **Journal of Optimization Theory and Applications**, 154 (2), 491–499, (2012).
- 65) *Necessary and Sufficient condition for a VMO function*, **Appl. Math. Computation**, 218 (24) 11952–11958, (2012).

- 66) *On some results in weighted Morrey spaces with applications to PDE* **Dept. of engineering sciences and mathematics, research report** 2012-02 (in coll. L.-E. Persson, N. Samko, P. Wall), ISSN:1400-4003, (2012).
- 67) *Partial regularity for $p(x)$ -harmonic maps* (in coll. A. Tachikawa, H. Takabayashi), **Transaction of the American Mathematical Society**, 365, 3329–3353, (2013).
- 68) *Uniqueness criterion of weak solutions for the dissipative quasi-geostrophic equations in Orlicz-Morrey spaces* (in coll. S. Gala, Y. Sawano, H. Tanaka), **Applicable Analysis**, 1–7, (2013).
- 69) *Logarithmically improved regularity criterion for the nematic liquid crystal flows in $\dot{B}_{\infty,\infty}^{-1}$* (in coll. S. Gala, Q. Liu), **Computers and Mathematics with Applications**, 65, 1738–1745, (2013).
- 70) *On the regularity criteria for the 3D magnetohydrodynamic equations via two components in terms of BMO space* (in coll. S. Gala), **Mathematical Methods in the applied Sciences**, 37 (15), 2320–2325, (2013).
- 71) *Remarks on Leray's self-similar solutions to the 3D MHD equations* (in coll. S. Benbernou, M. Terbeche), **Mathematical Methods in the Applied Sciences**, 37 (17) 2615–2618, (2014).
- 72) *A remark on regularity criterion of the Boussinesq equations with zero heat conductivity* (in coll. S. Gala, Z. Guo), **Applied Mathematical Letters**, 27, 70–73, (2013).
- 73) *On the regularity criteria for the 3D magnetohydrodynamic equations via two components in terms of BMO space* (in coll. S. Benbernou, S. Gala), **Mathematical Methods in the Applied Sciences**, 37 (15), 2320–2325, (2013).
- 74) *Persistence Analysis in a Kolmogorov-type Model for Cancer - Immune System Competition* (in coll. C. Bianca, F. Pappalardo, M. Pennisi), **Proceedings of the International Conference on Numerical Analysis and Applied Mathematics**, 1558, 1797–1800, (2013).
- 75) *On interior regularity of minimizers of $p(x)$ -energy functionals* (in coll. A. Tachikawa), **Nonlinear Analysis**, 93, 162-167, (2013).
- 76) *New environmentally sensitive patch index – ESPI– for MEDALUS protocol*, (in coll. A. Duro, V. Piccione, V. Veneziano), **AIP Conf. Proc., 10th Int. Conf. on Math. Problems in Engineering, Aerospace and Sciences, ICNPAA 1637**, 305–312, (2014).
- 77) *The environmentally sensitive patch applied to Medalus climate quality index*, (in coll. A. Duro, V. Piccione, V. Veneziano), **AIP Conf. Proc., ICNAAM 1738**, 480113, (2016).
- 78) *A regularity criterion in terms of pressure for the 3D viscous MHD equations*, (in coll. S. Gala, Z. Zhang), **Bull. of the Malaysian Math. Soc.**, ISSN:0126-6705, 40 (4), 1677–1690, (2015).
- 79) *A regularity criterion for the three-dimensional MHD equations in terms of one directional derivative of the pressure*, (in coll. S. Gala, Z. Guo), **Computers and Mathematics with Applications** 70 (12), 3057–3061, (2015).

80) *A regularity criterion for 3D micropolar fluid flows in terms of one partial derivative of the velocity*, (in coll. S. Gala), **Annales Polonici Mathematici** 116 (3), 217–228, (2016).

81) *A new regularity criterion for the Navier-Stokes equations in terms of the two components of the velocity*, (in coll. S. Gala), **El. Journal of Qualitative Theory of Differential Equations**, 26, 1-9, (2016).

82) *A new regularity criterion for strong solutions to the Ericksen–Leslie system*, (in coll. S. Gala), **Applicationes Mathematicae** 43 (1), 95–103, (2016).

83) *Boundary regularity of minimizers of $p(x)$ -energy functionals* (in coll. A. Tachikawa), **Annales de l’Institut Henri Poincaré / Analyse non lineaire**, 33 (2) (2016) 451–476, (2016).

84) *Logarithmically improved regularity criteria for supercritical quasi-geostrophic equations in Orlicz-Morrey Spaces*, (in coll. S. Gala), **Electronic Journal of Differential Equations**, 2016, 1–7, (2016).

85) *A logarithmic regularity criterion for the two-dimensional MHD equations*, (in coll. S. Gala), **Journal of Mathematical Analysis and Applications**, 444 (2), 1752–1758, (2016).

86) *Note on the weak-strong uniqueness criterion for the β -QG in Morrey - Campanato space*, (in coll. S. Gala), **Applied Mathematics and Computation**, 293, 65–71, (2017).

87) *On the blow-up criterion of strong solutions for the MHD equations with the Hall and ion-slip effects in R^3* , (in coll. S. Gala), **Zeitschrift für Angewandte Mathematik und Physik**, 67 (2) art.n. 18, (2016).

88) *A Remark on the Beale-Kato-Majda Criterion for the 3D MHD Equations with Zero Magnetic Diffusivity*, (in coll. S. Gala) **AIP Conference Proceedings**, 1738 art.n. UNSP 480115, (2016).

89) *Logarithmically improved regularity criterion for the Boussinesq equations in Besov spaces with negative indices*, (in coll. S. Gala) **Applicable Analysis**, 95 (6) 1271–1279, (2016).

90) *Logarithmical regularity criterion of the three-dimensional Boussinesq equations in terms of the pressure*, (in coll. M. Mehdene, S. Gala, Sadek, Z. Guo) , **Zeitschrift für Angewandte Mathematik und Physik**, 67 (5) art.n. 120, (2016).

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