CURRICULUM VITAE (*)

Hugo Beirão da Veiga

PERSONAL DATA:

Born: April 3, 1943 at Lisbon, Portugal
Name: Hugo
Surname: Beirão da Veiga
Citizenship: Portuguese and Italian
E-mail: hbeiraodaveiga@gmail.com
Address: Department of Mathematics–Pisa University.

EDUCATION:

– **Graduation in Mathematical Sciences**, Faculty of Sciences of the **University of Lisbon**, **1965**. **1971**.

1971-Ph.D.: **Docteur ès Sciences Mathématiques (Doctorat d'Etat)**, with very honorable mention. **Pierre et Marie Curie University (Paris VI-Sorbonne)**, **1971**.
Thesis Director: **Prof. Guido Stampacchia**. President Jury: **Prof. Jacques-Louis Lions**.

AREA of SPECIALIZATION:

Partial Differential Equations, Nonlinear Analysis, Mathematical Fluid Mechanics.

EMPLOYMENT:

– **Research Fellow** of the "Instituto de Alta Cultura", Portugal, at **Pisa** and **Rome** Universities **1965–71**.
– **CNR Visiting professor** at the **Sc. Norm. Sup. di Pisa**, during the academic year 1972-73.
– **Researcher** (grade equivalent to Associated Professor) at the IAC's Center **"Instituto de Física e Matemática"**, Lisbon, **1971–76**, interruption in 1972-74, due to military service in the Navy.

FULL PROFESSOR positions:

(*) Events and talks held merely on-line are not included below.

– **Trento University**, 1976–87.
– **Pisa University**, 1987–90.
– **"Accademia Nazionale dei Lincei**", Rome, triennium **1990–93**.
– **Pisa University**, 1993 –2011.

– **Simultaneous Full Professor positions during two sabbatical years:**

– **Mathematics Department**, and "**Mathematics Research Center**", **University of Wisconsin-Madison**,(October 1981–March 1982).
– **School of Mathematics–University of Minnesota –Minneapolis**, March 1982 – June 1982).
– **Mathematics Department–University of Wisconsin – Madison** (1985–86).
– **Faculty of Science–University of Lisbon** (March–June 1998).
– **Faculty of Science–University of Lisbon**, under a **C. Gulbenkian Professorship** (February–July 2006).

MISCELLANEOUS:
– **Prize "Artur Malheiros"** for the Mathematical Sciences, with Prof. João Paulo Dias, **Lisbon Academy of Science**, 1973.
– Nominated by the President of the Portuguese Republic in 2000 with the rank of **Grand-officer of the twelfth century "Ordem Militar de Sant'Iago da Espada"**, nowadays the highest honorific order to scientific, literary and artistic merit.
– **Director of the Department of Applied Mathematics – Pisa University**, 1996–2000.
– First **President of the Scientific Council** of the **International Center of Mathematics-CIM** (Coimbra), 1996–2000.
– Member of the **Scientific Council** of the **CIME-International Mathematical Summer Center-Florence**, 2011-2019.
– **Fellow of the Portuguese Academy of Science (Academia das Ciências de Lisboa)**.

TWO DEDICATED INTERNATIONAL CONFERENCES:

— **"Nonlinear Partial Differential Equations. Theory and Applications", International Conference in honour of Hugo Beirão da Veiga's on his 60th Birthday**, June 26-28, 2003, Madeira Island, Portugal.

Organizing Committee: G.P. Galdi, A. Sequeira, A.L. Silvestre, R. Vasconcelos.

Speakers: O. A. Ladyzhenskaya, L. Nirenberg, J. Bemelmans, L.C. Berselli, H. Brézis, J.P. Dias, I. Fonseca, H. Frid, J. Heywood, Ling Hsiao, D. Kinderlehrer, P. Marcati, S. Miyatake, S. Nazarov, T. Nishida, P. Oliveira, G. Da Prato, A. Quarteroni, R. Rannacher, A. Robertson, J.F. Rodrigues, R. Russo, P. Secchi, G. Seregin, C. Simader, V. A. Solonnikov, L. Tartar, R. Turner, A. Valli.

— **"Recent Advances in Partial Differential Equations and Applications", International Conference in honor of Hugo Beirão da Veiga's 70th Birthday**, February 17-21, 2014. Levico Terme (Trento), Italy.

Scientific Committee: Claude Bardos, Vladimir Georgiev, Vicentiu Radulescu, Adélia Sequeira, Vsevolod A. Solonnikov.

Speakers: C. Amrouche, P. Antonelli, C. Bardos, V. Benci, L.C. Berselli, D. Breit, G. Buttazzo, D. Chae, F. Crispo, R. Farwig, E. Feireisl, F. Flandoli, G.P. Galdi, V. Georgiev, Z. Grujic, P. Kaplicky, M. da Costa Lopes Filho, P. Maremonti, A. Matsumura, S. Necasova, H. J. Nussenzveig Lopes, A. Quarteroni, V. Radulescu, R. Rautmann, J.F. Rodrigues, T. Ruggeri, M. Ruzicka, W. Sadowski, G. Seregin, Y. Shibata, T. Shilkin, A.L. Silvestre, C. Simader, V. A. Solonnikov, W. Varnhorn, A.F. Vasseur, Zhouping Xin, T. Yanagisawa.

Conference Proceedings: **Contemporary Mathematics, Vol. 666, American Mathematical Society**, 2016. Editors, V.D. Radulescu, A. Sequeira, V.A. Solonnikov.

ORGANIZATION AND MEMBERSHIP OF SCIENTIFIC COMMITTEES OF INTERNATIONAL MEETINGS (40 item):

- **CIRM-International Center for the Math. Research**: "Nonlinear Partial Differential Equations", Trento, June 1980.
- **CIME-Centro Internazionale Matematico Estivo**:"Fluidynamics", Varenna, August 1982.
- **Scuola Normale Superiore** and **Math. Department Univ. Pisa**: "Fluidynamics", Pisa, May 1987.
- **International Center for Theoretical Physics** and **International Atomic Energy Agency**: "Workshop on Theoretical fluid Mechanics and Applications", Miramare-Trieste, January 1989.
- **Scuola Superiore S. Anna**: "Modelli Matematici nelle Scienze Applicate", Pisa, May 1990.

- **Math. Dept. -Pisa University**, under the auspices of the **Consiglio Nazionale delle Ricerche**: "Nonlinear Variational Problems and Partial Differential Equations", Isola d'Elba (It), October 1990.
- **CIRM-International Center for the Math. Research**: "Partial Differential Equations and related subjects", Conference in the honour of **Louis Nirenberg**, Trento, September 1990.
- **CIRM-International Center for the Math. Research**: "Partial Differential Equations and Continuum Mechanics", Trento, June 1991.
- **ICTP-International Centre for Theoretical Physics**: Workshop on Qualitative Aspects and Applications of Nonlinear Evolution Equations", Miramare, Trieste, May 1993.
- **EQUADIFF 95**, **Lisbon**, July 1995.
- "International Conference on Applied Analysis", dedicated to Prof. **J. Nečas**, **Lisbon**, February 1997.
- Summer School "The Mathematical Approach to Turbulence: Numerical and Analytical Techniques", **Certosa di Pontignano (Siena)**, June 1998.
- Trimester on Theoretical and Computational Fluid Dynamics (May–July 1999), **Coimbra and Lisbon**.
- Summer School "Navier–Stokes Equation and Related Topics", **Lisbon**, June–July 1999.
- "**IPERBS 2000**", **Brescia**, November 2000.
- "Contemporary Challenges in Applied Fluid Mechanics", **Capo Miseno (Naples)**, May-June 2001.
- "Regularity in Partial Differential Equations", **Lisbon**, November 2001.
- **V.A.Steklov Institute of Mathematics (Russian Acad. of Sciences)** and **Euler International Mathematical Institute**: "Navier-Stokes Equations and Applications" **NSEC 8**, **St.Petersburg** , September 2002.
- **"Journées a la mémoire de Guido Stampacchia"**, **Paris**, March 2003.
- "Partial Differential Equations in Mathematical Physics", **in memory of O.A.Ladyzhenskay** Levico **Trento, Italy**, October 2004.
- "Partial Differential Equations and Applications", **Ferrara, Italy**, March-April 2005.
- International Conference "Mathematical Fluid Mechanics and Applications", **Evora, Portugal**, June 2008.
- **Centro di Ricerca Matematica "E. De Giorgi", Sc. Normale Sup. Pisa**: "Navier-Stokes Equations: Classical and Generalized Models", Pisa, September 2008.

– **CIRM-International Center for the Math. Research**: "Mathematical Physics and PDE's", Levico Terme (Trento), September 2009.

– **CIRM-International Center for the Math. Research**: "International Summer School on Mathematical Fluid Dynamics", Levico Terme (Trento), June 27-July 2, 2010.

– **International C.I.M.E. Summer School** "Topics in Mathematical Fluid-Mechanics", Cetraro (Cosenza), September 2010.

– "International Conference on Mathematical Fluid Mechanics and Biomedical Applications", **Azores, Portugal**, May 31- June 4, 2011.

– **CIRM-International Center for the Math. Research**: "PDEs in Mathematical Physics and their Numerical Approximation", Levico Terme (Trento), September 2011.

– **CIRM-International Center for the Math. Research**: "International Winter School on Mathematical Fluid Dynamics", Levico Terme, December 2012.

– **WASCOM XVII**: "International Conference on Waves and Stability in Continuous Media", Levico Terme (Trento), Giugno 2013.

– **CIRM-International Center for the Math. Research**: "Fluid Dynamics and Electromagnetism: Theory and Numerical Approximation", on the occasion of **P. Secchi** and **A. Valli** 60th birthday, Levico Terme (Trento), June 3-6, 2014.

– **Riemann International School of Mathematics**: "A Meeting with **Louis Nirenberg**", Varese, (Villa Toeplitz), June 10-13, 2014.

– "Workshop on PDE's and Biomedical Applications", **Lisbon**, December 4-6, 2014.

– **Lisbon Academy of Science**: "Workshop on PDE's and Biomedical Applications", Lisbon, November 13-15, 2017.

– **CIRM-International Center for the Math. Research**: "Recent Advances in Nonlinear Analysis", On the occasion of 60th birthday of **V. Radulescu**, Levico Terme (Trento-Italy), May 28-30, 2018.

– **FUDAN University, Shanghai, China**: "**LIASFMA China-Italy Conference on Partial Differential Equations and Their Applications**", December 9th-13th, 2019.

– **Evora's University,** "International Conference on Nonlinear Differential Equations and Applications", Evora–Portugal, July 4–6, 2022.

– **Riemann International School of Mathematics**: "Analysis and PDEs", on the occasion of Vicentiu Radulescu's 65th birthday, Varese (Villa Toeplitz), Italy, May 29–31 2023.

MAIN SPEAKER (PLENARY TALKS) IN INTERNATIONAL MEETINGS (100 items).

— **III Jornadas Matemáticas Hispano–Lusitanas**, **Seville**, April 1974.

— **Ettore Majorana Scientific Center**: "Recenti Sviluppi ed Applicazioni della Teoria delle Disequazioni Variazionali", (Erice-Sicily) May 1975.

— **"Nato Advances Study Institute on Nonlinear Operators"**, **Bruxelles**, September 1975.

— **International Centre for Theoretical Physics- Miramare, Trieste**: Workshop on "Recent Advances on the Theory of Evolution Equations", November 1979.

— **MFO- Oberwolfach Research Institute for Mathematics**: "Nonlinear Functional Analysis and Partial Differential Equations",December 1979.

— Annual meeting **GNAFA-"National Group for Functional Analysis and Applications"**, Rimini, September 1980.

— , **Politecnico di Torino**: "Modelli in Meccanica dei Fluidi: Aspetti di Analisi Funzionale e Numerica" January 1981.

— **Bologna University**: Cycle of seminars at the **"Specialization School on Physics", Physics Inst**., April 1984.

— **SISSA-Scuola Internazionale Superiore di Studi Avanzati**: Cycle of lectures, Miramare (Trieste), May 1984.

— **SISSA-International Center for Theoretical Physics, Trieste**: "Autumn Course on Semigroups: Theory and Applications", December 1984.

— **SISSA-Scuola Internazionale Superiore di Studi Avanzati**, Miramare, (Trieste): Cycle of lectures, March 1985.

— **IMA- Institute for Mathematics and its Applications Univ. of Minnesota, Minneapolis**: "Dynamical Problems in Continuum Physics", June 1985.

— **CIRM**-International Center for the Math. Research: "Calculus of Variations and Partial Differential Equations", meeting in honour of **Prof. Hans Lewy**), Trento, May 1986.

— **Scuola Normale Superiore di Pisa**: "Fluidynamics" workshop, May 1987.

— International Center for the Math. Research-**CIRM**:"Advanced Topics in the Theory of Dynamical Systems", Trento, June 1987.

— **Institute for Scientific Interchange-Turin**: "Nonlinear Hyperbolic Equations in Applied Sciences", June 1987.

— **Italian Science Research Council-CNR**, **San Luca's Academy- Rome**: "International Conference in memory of **Guido Stampacchia**, Rome 1988.

— **MFO- Oberwolfach Research Institute for Mathematics**: "The Navier–Stokes Equations: Theory and Numerical Methods", September 1990.

— **Math. Department- Padova University**: "Conference on Nonlinear Partial Differential Equations", April 1990.
— **Math. Institute- Charles University in Prague**: "Mathematical Modelling in Continuum Mechanics", Prague, August 1990.
— workshop "PDE and Continuum Mechanics", **Trento**, June 1991.
— **MFO- Oberwolfach Research Institute for Mathematics**: "The Navier–Stokes Equations: Theory and Numerical Methods", August 1991.
— **Accademia Sinica (Chinese Academy of Sciences)**: "Meeting on Partial Differential Equations", **Peking** (Beijing) September 1991.
— "Fourth International Conference on Hyperbolic Problems", **Taormina** (Italy) April 3–8 1992.
— **Istituto per le Applicazioni del Calcolo–Consiglio Nazionale delle Ricerche**: "International Conference on Nonlinear Evolution Problems", Rome, June 1992.
— **RIMS-Research Institute for Mathematical Sciences**: Symposium on "Mathematical Analysis of Phenomena in Fluid and Plasma Dynamics", **Kyoto University**, October 22–24, 1992.
— **Math. Departement- Nara University**: "Mathematical Analysis and Fluidmechanics", Nara (Japan), October 26–28, 1992.
— **Ecole Normale Supérieure, Paris**: "Equations aux Dérivées Partielles et Applications", Paris, March 29–April 1, 1993.
— **CMAF- Lisbon University** and **Calouste Gulbenkian Foundation**: Cycle of lectures, Lisbon, June–July 1993.
— **Institute of Mathematics, Rhein–Westfalien University**: Cycle of lectures at the graduate School "Hyperbolische Differentialgleichungen–Theory and Numerik", Eringerfeld, October 1993.
— "Colloquium "Fortschritte in der Kontinuums–Mechanik" (meeting in honour of Prof. **V.A. Solonnikov**), **Paderborn, Germany**, October 1993.
— "Third International Conference on Navier–Stokes Equations and related Nonlinear Problems", **Madeira Island**, May 1994.
— "Fifth Int. Colloquium on Diff. Equations", **Plovdiv (Bulgaria)** August 1994.
— **Politecnico di Milano**: "Giornate di Studio su Problemi Iperbolici", Milano, Ottobre 1994.
— **Fudan University, Shangai**: "International Conference on Nonlinear Evolution Equations and Infinite Dimensional Dynamic Systems", Shanghai (China), June 12–17, 1995.
— **EQUADIFF 95, Lisbon**, July 24–29, 1995.
– "International Colloquium", **Ferrara**, October 23–24, 1995.

— "Evolutionary Problems for Dynamical Systems", **Trento**, October 4–6, 1995.
— "Sixth Int. Conf. on Navier–Stokes Equations and
— **"V Incontro Nazionale sulle Eq. Iperboliche–IPERAQ 97**", L'Aquila, November 1997.
— "Recent Advances in Partial Diff. Eq.", on the 20^{th} anniversary of **Guido Stampacchia**'s death, **Rome**, May 1998.
— **Math. Institute– Charles University in Prague**: **"PDE Prague 98"**– International Conference on Partial Differential Equations Theory and Numerical Solutions, Prague, August 1998.
— **IST–Instituto Superior Tecnico**: "Conference on Dynamical Systems and Evolutionary Equations", in honor of **Jack K. Hale**, Lisbon, November 23–28, 1998.
— **Capo Miseno, Naples**: International Conference "Topics in Mathematical Fluid Mechanics", May, 2000.
— **Capo Miseno, Naples**: International Conference "Contemporary Challenges in Applied Fluid Mechanics", Project of the European Science Foundation, May-June 2001.
— **Rolduc, Holland**: "Fourth European Conference on Elliptic and Parabolic Problems", , June 2001.
— **CMAF–Lisbon University**: "Regularity in Partial Differential Equations", Lisbon, November 2001.
— **Coimbra University**: "Encontro Nacional da Sociedade Portuguesa de Matematica 2002", Coimbra (PT), February 2002.
— **Politecnico di Milano**: "Cardiovascular System: from Mathematical Modelling to Clinical Applications", Milan, March 2002.
— **Instituto de Matematica Pura e Aplicada–IMPA**: "International Conference-IMPA 50 Years", Rio de Janeiro, Brasil, June 2002.
— **V.A. Steklov Institute of Mathematics, Russian Acad. of Sciences** and **Euler International Mathematical Institute, St.Petersburg**: "Navier-Stokes Equations and Applications" (NSEC 8), in honor of **O.A. Ladyzhenskaya**, St. Petersburg (Russia), September 2002.
— **RIMS-Research Institute for Mathematical Sciences**: RIMS Symposium on "Wave Phenomena and Asymptotic Analysis", **Kyoto University, Japan**, November 2002.
— **Laboratoire Jacques-Louis Lions, Paris**: "Journées a la mémoire de **Guido Stampacchia**",Paris , March 2003.
— **Ettore Majorana Scientific Center**: 38th Workshop "Variational Analysis and Applications", in memory of **G. Stampacchia** and **J.-L. Lions**, Erice-Sicily, June

2003.

— **Paderborn University, Germany**: "Workshop on Navier-Stokes Equations", on the 70th. birthday of **V.A. Solonnikov**,Paderborn, July 2003.

— **Ferrara University**: International Meeting "Directions in Partial Differential Equations", in occasion of 70th of **V.A. Solonnikov**, Ferrara (Italy), November 2003.

— **Paderborn University, Germany**: Workshop "Navier-Stokes Equations and Related Topics", in occasion of 65th of **H. Sohr**, Paderborn, February 2004.

— **"Fifth European Conference on Elliptic and Parabolic problems**: A Special tribute to the Work of **Haim Brezis"**, **Gaeta, Italy**, May-June 2004.

— "Conference in honour of **João Paulo Dias** on his 60.th birthday", **Lisbon**, September 2004.

— International Conference"Partial Differential Equations in Mathematical Physics", Levico **Trento, Italy**, October 2004.

— **"Abschluss Kolloquium** Graduiertenkolleg "Nichtlineare Differentialgleichungen: Modellierung, Theory, Numerik, Visualisierung", **Freiburg, Germany**, November 2004.

— **"Kyoto Conference on the Navier-Stokes Equations and their Applications", Research Institute for Mathematical Sciences–Kyoto University, Kyoto**, January 6–10, 2006.

— **Mathematics Dept.–Evora University**: "III International Conference on Mathematical Fluid Mechanics and Applications", Evora, Portugal, June 15–17, 2006.

— International Conference "Mathematical Fluid Mechanics", **Estoril, Portugal**, May 21–25, 2007.

— **The Euler International Mathematical Institute** and **St.Petersburg Department of the Steklov Mathematical Institute, of the Russian Academy of Sciences**: International Conference " Mathematical Hydrodynamics: Euler Equations and Related Topics, EEC-300", dedicated to 300th birthday of Leonard Euler. St.-Petersburg, RUSSIA, June 7–9, 2007.

— **Evora University**: International Conference "Mathematical Fluid Mechanics and Applications", Evora, Portugal, June 2008.

— **Technische Universitat Darmstadt**: International Conference "Mathematical Fluid Dynamics", **Darmstadt, Germany**, September 2008.

— **Centro di Ricerca Matematica "E. De Giorgi"– Scuola Normale Sup. Pisa**: "Navier-Stokes Equations: Classical and Generalized Models", Pisa, September 2008.

— **RWT–Rheinisch-Westfaelische Technische Hochschule–Aachen**: "Workshop on Navier-Stokes Equations 2009", Aachen, Germany, June 2009.
— **MFO–Oberwolfach Research Institute for Mathematics**: "Mathematical Aspects of Hydrodynamics", Oberwolfach, Germany, July 2009.
— **8th AIMS International Conference** on Dynamical Systems, Differential Equations and Applications, Special session "Navier-Stokes Equations and Related Problems",**Dresden, Germany**, May 2010.
— **CIRM–Centre International de Rencontres Mathematiques–Luminy**: "Vorticity, Rotation and Symmetry (II)– Regularity of Fluid Motion", Luminy (Marseille), May 23-27, 2011.
— **Azores Island–Portugal**: "International Conference on Mathematical Fluid Mechanics and Biomedical Applications", May 31- June 4, 2011.
— **RWT–Rheinisch-Westfaelische Technische Hochschule–Aachen** "Workshop on Navier Stokes Equations 2011", Aachen, Germany, June 14-17, 2011.
— **CIRM–International Center for the Math. Research**: "PDEs in Mathematical Physics and their Numerical Approximation". Levico Terme (Trento), September 2011.
— **Institut Mittag-Leffler**, from the **Royal Swedish Academy of Sciences**: "Advances in Mathematical Analysis of Partial Differential Equations", On the 90th anniversary of **Olga A. Ladyzhenskaya**, Stockholm, Sweden, 9-13 July 2012.
— **Polish Academy of Sciences–Mathematical Research Center–Bedlewo**: "Parabolic and Navier Stokes Equations", Bedlewo (Poland), September 2-8, 2012.
— "International Winter School on Mathematical Fluid Dynamics", Levico Terme (Trento), December 2012.
— **Nara University**: "International Conference on the Mathematical Fluid Dynamics", on the occasion of Prof. **Y. Shibata** 60th birthday, Nara (Japan), March 5-9, 2013.
— **Warwick University**, in **Venice**: International Conference " The Navier-Stokes Equations in Venice", Venice, April 8-12, 2013.
— **RWT-Aachen University**: "Workshop on Navier Stokes Equations 2013", Aachen, Germany, May 21-24, 2013.
— **WASCOM XVII** "International Conference on Waves and Stability in Continuous Media", Levico Terme (Trento), Giugno 2013.
— **CIRM–International Center for the Math. Research**: "Fluid Dynamics and Electromagnetism: Theory and Numerical Approximation", on the occasion of Professors **P. Secchi** and **A. Valli** 60th birthday, Levico Terme (Trento), June 3-6, 2014.

— **Lisbon University**: "Progress in Nonlinear Partial Differential Equations", on the occasion of Professors **N.N. Uraltseva** and **V.A. Solonnikov** 80th birthday, Lisbon, May 29-31, 2014.

— **Ferrara University**: "Classical Problems and New Trends in Mathematical Fluid Dynamics", on the occasion of **K. Pileckas**, 60th birthday, Ferrara (Italy), September 29 -October 3, 2014.

— **Lisbon University**: International Conference "AMFM-2014, Advanced in Mathematical Fluid Mechanics–Stochastic and Deterministic Methods", Lisbon, June 30-July 5, 2014.

— **CICAM-7**–"Seventh China-Italy Colloquium on Applied Mathematics ", Palermo-Italy, September 8-11, 2014.

— **Faculty of Mathematics, Informatics and Mechanics– University of Warsaw**: "Global dynamics in evolutionary PDEs", on the occasion of **G. Lukaszewicz**'s 60th birthday. Warsaw,Poland, April 17-18, 2015.

— "International Conference on Differential and Difference Equations and Applications", **Amadora, Portugal**, May 18 - 22, 2015.

— **18th WASCOM Conference** "XVIII International Conference on Waves and Stability in Continuous Media", Cetraro (Cosenza, Italy), June 1-5 2015.

— **Freiburg University, Germany**: "Colloquium to celebrate the 50. anniversary of the defense of **Herbert Amann**'s PhD thesis", Freiburg, Germany, July 2, 2015.

— **Polish Academy of Sciences–Mathematical Research Center–Bedlewo**:"Mathematical Fluid Mechanics. Old Problems, New Trends", on the occasion of **W. Zajaczkowski**'s 70th birthday, Bedlewo, Poland, August 30- September 5,2015.

— **Universidade Nova de Lisboa**: "International Workshop on Calculus of Variations and its Applications", on the occasion of **Luisa Mascarenhas**' 65th birthday, Caparica, Portugal, December 17-19, 2015.

— **CIRM–International Center for the Math. Research**:"Recent Advances in Nonlinear Analysis", On the occasion of 60th birthday of **V. Radulescu**, Levico Terme, Trento-Italy, May 28-30, 2018.

— **St.Petersburg Department of the Steklov Mathematical Institute, of the Russian Academy of Sciences**: "PDE"s and Mathematical Hydrodynamics:", in honor of **Vsevolod A. Solonnikov**'s 85'th birthday, St. Petersbutg, Russia, July 30 - August 3,, 2018.

— **Fudan University–Shanghai**: "LIASFMA China-Italy Conference on Partial Differential Equations and Their Applications", Shanghai, China, December 9th-13th, 2019.

— **Euler International Mathematical Institute–St.Petersburg**: "O.A. Ladyzhen-

skaya Centennial Conference on Partial Differential Equations and Applications", St. Petersburg–Russia, 16–22 July, 2022.

— **Cyber-Conference**: "Trends in Partial Differential Equations", Dedicated to Vsevolod A. Solonnikov in the occasion of his 90th birthday, 9–10 June 2023.

— **GSSI–Gran Sasso Science Institute**: "International Conference on Partial Differential Equations and Applications", in honor of **Pierangelo Marcati**'s 70'th birthday, L'Aquila-Italy, 19–23 June, 2023.

— **Department of Mathematics –Politecnico of Milano**: "Christmas Workshop on Fluid Mechanics", Milano-Italy, 19–21 December, 2023.

LIST OF SEMINARS HELD IN THE CONTEXT OF SHORT-TERM INVITED VISITS, NOT INCLUDED IN CONFERENCES (PREVIOUS SECTION).

1) FOREIGN (NON ITALIAN OR PORTUGUESE) INVITATIONS (38 items):

– **Pierre et M. Curie (Paris VI) University**, Faculty of Science, May 1971.
– **Pierre et M. Curie (Paris VI) University**, Faculty of Science, Feb. 1974.
– **Paris–Nord University**, Math. Department, Paris, Oct. 1978.
– **Univ. Innsbruck**, Math. Dept., Nov. 1978.
– **Labotatoire Analyse Numérique, Univ. Pierre et M. Curie, Paris VI**, June 1979.
– **Bonn University**, Mathematical Dept., July 1980.
– **Univ. Paris–Orsay**, Fac. Science, Paris, June 1981.
– **Chicago University**, Math. Department, Oct. 1981.
– **Univ. Wisconsin–Madison**, Math. Department, Nov. 1981.
– **Brown University–Providence**, Math. Department, Feb. 1982.
– **Univ. of Massachusetts** (Amherst), Dept. of Math. and Statistics, February 1982.
– **Courant Institute of Mathematical Sciences–New York University**, Feb. 1982.

– **Purdue University–Indiana**, Dept. Mathematics, March 1982.
– **School of Mathematics, University of Minnesota–Minneapolis**, April 1982.
– **School of Mathematics– Univ. of Minnesota–Minneapolis**, May 1982.
– **École Normale Supérieure**, Paris, Oct. 1984.
– **Univ. Paris–Nord**, Fac. of Science, Paris, Oct. 1984.
– **Mathematics Research Center (MRC)** and **Math. Department** joint Seminar, **Univ. Wisconsin–Madison**, Sept. 1985.
– **Mathematics Research Center (MRC)** and **Math. Dept.** joint Seminar, **Univ. Wisconsin–Madison**, Oct. 1985.
– **School of Mathematics–Univ. of Minnesota–Minneapolis**, Oct. 1985.
– **Courant Institute of Mathematical Sciences–New York University**, New-York, Nov. 1985.
– **Pierre et M. Curie (Paris VI) University**, Paris, Jan. 1988.
– **Bonn University– Mathematical Institute**, Bonn, June 1988.
– **Courant Institute of Mathematical Sciences–New York University**, New-York, March 1991.
– **Institute for Advanced Study (Princeton)**, March 1991.
– **Princeton University's Department of Mathematics**, March 1991.
– **Collège de France (Paris)**, April 1991.
– **Accademia Sinica–Chinese Academy of Sciences (Peking)**: September 1991.
– **Xi'an Jiaotong University**, Xi'an (China), September 1991.
– **LOMI, Steklov Mathematical Institute of the Russian Academy of Science (S. Petersburg)**, September 1992.
– **"Osaka Electric Communications University"**: Osaka, Japan, October 1992.
– **Humboldt–Universität zu Berlin**, Institut für Mathematik, Berlin, June 1997.
– **Nara University**, Nara (Japan), February 2006.
– **Lab. Analyse Numérique–Pierre et Marie Curie University (Paris VI)**, February, 2006.
– **OXFORD Centre for Nonlinear PDE**, Oxford, April 24– May 1, 2008.
– **LOMI, Steklov Mathematical Institute of the Russian Academy of Science**, S. Petersburg, May 2012.
– **Department of Applied Mathematics – Donghua University–Shanghai**, China, October 18, 2018.
– **School of Mathematics – Fudan University– Shanghai**, China, October 19, 2018.
– **The Institute of Mathematical Sciences – The Chinese University of Hong Kong**, Hong Kong (China), October 24, 2018.

2) ITALIAN AND PORTUGUESE INVITATIONS (59 items):

– **Sc. Norm. Sup. Pisa**, 5 lectures, 1972–73.
– Lab. Analisi Numerica CNR, **Univ. Pavia**, Jan. 1973.
– Lab. Analisi Numerica CNR, **Univ. Pavia**, Feb. 1994.
– Fac. Sc. **Univ. Rome**, 2 lectures, Dec. 1974.
– Fac. Sc. **Univ. Genova**, March 1975.
– Fac. Sc. **Univ. Genova**, June 1976.
– Fac. Sc. **Univ. Trento**, June 1976.
– **Sc. Norm. Sup. Pisa**, Feb. 1977.
– Lab. Analisi Numerica, **Univ. Pavia**, Jan. 1980.
– Fac. Sc. **Univ. Milan**, May 1980.
– **Sc. Norm. Sup. Pisa**, 2 lectures, May 1980.
– Lab. Analisi Numerica CNR, **Univ. Pavia**, April 1981.
– Centro di Analisi Globale, **Univ. Florence**, May 1981.
– Math. Dept., **Univ. Florence**, Nov. 1982.
– Math. Dept., **Univ. Rome I**, Dec. 1982.
– **Sc. Norm. Sup. Pisa**, Feb. 1983.
– Math. Dept., **Univ. Florence**, Feb. 1983.
– Math. Dept., **Univ. Rome I**, Dec. 1983.
– Math. Dept., **Univ. Rome I**, Jan. 1984.
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– Ist. Analisi Numerica CNR, **Univ. Pavia**, Nov. 1984.
– Ph. D. Course at the **"International School for Advances Studies"** (SISSA), Trieste, March 1985.
– Fac. Ing., **Univ. Florence**, Feb. 1986.
– Fac. Sc., **Milan Univ.**, April 1986.
– Fac. Sc., **Univ. Rome I**, May 1986.
– Ist. Appl. Math., **Pisa Univ.**, Jan. 1987.
– **Istituto per le Applicazioni del Calcolo**, Rome, April 1987.
– Cycle of seminars at the "Half–year program on Evolution Equations", **Math. Dept. and Sc. Normale Sup. Pisa**, May 1987.
– Inst. Applied Math., **Univ. Pisa**, May 1987.
– Inst. Applied Math., **Univ. Florence**, March 1989.

– Fac. Sc., **Univ. Rome I**, March 1989.

– Math. Inst., **L'Aquila Univ.**, March 1989.

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– Math. Department, **Univ. of Trento**, March 1993.

– Math. Department, IST, **Lisbon**, March 1993.

– Math. Department, **Univ. of Coimbra** (Portugal), March 1993.

– CMAF, **Univ. Lisbon**, June 1995.

– Mathematics Dept., **Univ. Trento**, December 1995.

– CMAF, **Univ. Lisbon**, February 1996.

– Department of Mathematics – IST, **Lisbon**, July 1997.

– Department of Mathematics, **Univ. Ferrara**, March 2001.

– CMAF, **Lisbon University**, January 2004.

– Math. Department, **Florence University**, Mai 2004.

– Math. Department, IST, **Lisbon**, Febbruary 2005.

– CMAF, **Lisbon University**, Febbruary 2005.

– CMAF, **Faculty of Science, Lisbon University**, June 2006.

– Math. Department, **Univ. of Brescia**, April 2008.

– **Academia das Ciências de Lisboa**, July 16, 2009.

– CMAF, **Univ. Lisbon**, February 18, 2010.

– CMAF, **Univ. Lisbon**, December 2, 2010.

– Mathematical Department, **Univ. Roma "La Sapienza"**, Febbruary 9, 2011.

– CMAF, **Univ. Lisbon**, April 7, 2011.

– **L'Aquila University, March 2015.**

– **Napoli-2 University (Caserta), February 2015.**

– **Conference "Equazioni alle Derivate Parziali nella Dinamica dei Fluidi", Centro E. de Giorgi, Pisa, February 5-7, 2018.**

– **Faculty of Science - Lisbon University, February 28, 2019.**

– **CAMGSD–Instituto Superior Tecnico– Lisbon University. WADE seminar: May 11, 2023.**

RESEARCH (*) PUBBLICATIONS

Pubblications in proceedings of scientific meetings and similars are not included except for n. 67 and n. 81 which contain new results, not published elsewhere.

1. **"Sulla hölderianità delle soluzioni di alcune disequazioni variazionali con condizioni unilaterali al bordo", Annali di Matematica Pura ed Applicata vol. 83 (1969), 73–112.**
2. **"Régularité pour une classe d'inéquations nonlinéaires", Comptes Rendus de l'Académie de Sciences de Paris, tome 271 (1970), 23–25.**
3. **"Sur la régularité des solutions de l'équation div $A(x, u, \nabla u) = B(x, u, \nabla u)$ aves des conditions aux limites unilaterales et mêlées", Annali di Matematica Pura ed Applicata vol. 93 (1972), 173–230.**
4. **"Equazioni ellittiche non lineari con ostacoli sottili. Applicazioni allo studio dei punti regolari" (joint paper with F. Conti). Annali della Scuola Normale Superiore di Pisa, vol. 28 (1972), 535–562.**
5. **"Proprietà di sommabilità e di limitatezza per soluzioni di disequazioni variazionali ellittiche". Rendiconti dell'Università di Padova, vol. 40 (1972), 141–171.**
6. **"Punti regolari per una classe di operatori ellittici nonlineari". Ricerche di Matematica, vol. 21 (1972), 1–41.**
7. **"Continuité des solutions d'une inéquation parabolique" (joint paper with J.P. Dias). Comptes Rendus Academie des Sciences de Paris, tome 274 (1972), 192–193.**
8. **"Régularité des solutions d'une équation parabolique non linéaire aves des constraintes unilatérales sur la frontière" (joint paper with J.P. Dias). Annales de l'Institut Fourier de Grenoble, vol. 22 (1972), 161–192.**
9. **"Sur l'existence et la régularité des solutions faibles d'une équation parabolique non linéaire" (joint paper with J.P. Dias). Journal für die Reine und Angewandte Mathematik, vol. 260 (1973), 181–199.**
10. **"Un principe de maximum pour les solutions d'une classe d'inéquations paraboliques quasi–linéaires". Archive for Rational Mechanics and Analysis, vol. 55 (1974), 214–224.**

(*) paper-published

11. **"Sur quelques inéquations paraboliques". Journal of Mathematical Analysis and Applications, vol. 45 (1974), 324–347.**
12. **"Sul problema misto per le equazioni lineari ellittiche del secondo ordine". American Journal of Mathematics 97 (1976), 973–981.**
13. **"Sur le comportement du maximum ponctuel des solutions de certaines problèmes paraboliques par rapport au temps". Comptes Rendus Académie de Sciences de Paris, tome 277 (1974), 995–997.**
14. **"On the $W^{2,p}$–regularity for solutions of mixed problems". Journal de Mathématiques Pures et Appliquées, vol. 53 (1974), 279–290.**
15. **"Sur la surjéctivité de certains opérateurs non linéaires liés aux inéquations variationelles" (joint paper with J.P. Dias). Bollettino della Unione Matematica Italiana, vol. 10 (1974), 52–59.**
16. **"Differentiability for Green's operators of variational inequalities and applications to the calculus of bifurcation points". Journal of Functional Analysis, vol. 34 (1979), 72–78.**
17. **"A remark on the differentiability for Green's operators of variational inequalities". Atti della Accademia Nazionale dei Lincei, vol. 58, serie 8 (1975), 479–481.**
18. **"Existence of strong solutions for a class of nonlinear partial differential equations satisfying nonlinear boundary conditions". Annali della Scuola Normale Superiore di Pisa, 3(1976), 377–404.**
19. **"Differentiability and bifurcation points for a class of monotone nonlinear operators". Annali di Matematica Pura Applicata, 110 (1976), 321–333.**
20. **"Sul piú grande punto di biforcazione positivo per una classe di operatori potenziali non differenziabili". Atti della Accademia Nazionale dei Lincei, serie 8, 59 (1975), 615–619.**
21. **"On bifurcation and asymptotic bifurcation for non differentiable potential operators and for systems of Hammerstein type". Studies in Analysis, Advances in Mathematics Supplementary Studies, vol.4, Academic Press (1979), 241–269.**
22. **"Bifurcation dans des espaces de Banach pour une couple d'opérateurs non différentiables àl'origine". Comptes Rendus Académie des Sciences de Paris tome 283 (1976), serie A, 329–331.**
23. **"Existence et détermination du premier point de bifurcation pour des couples d'opérateurs non différentiables à l'origine", Annali di Matematica Pura ed Applicata 119 (1979), 379–390.**

24. "Esistenza e calcolo del primo punto di biforcazione asintotica per una coppia di operatori potenziali non differenziabili all'infinito". Bollettino della Unione Matematica Italiana, vol. 15–B (1978), 566–575.

25. "Inhomogeneous evolution equations in Banach space with bounded variation data". Nonlinear Analysis:TMA, vol. 3 (1979), 249–259.

26. "On the motion of a non homogeneous ideal incompressible fluid in a external force field" (joint paper with A. Valli). Rendiconti del Seminario Matematico dell'Università di Padova, vol. 59 (1978), 117–145.

27. "On the Euler equations for non–homogeneous fluids (I)" (joint paper with A. Valli). Rendiconti del Seminario Matematico dell'Università di Padova, 63 (1980), 151–168.

28. "On the Euler equations for non–homogeneous fluids (II)" (joint paper with A. Valli). J. Math. Analysis Applications, 73 (1980), 338–350.

29. "On an Euler type equation in hydrodynamics". Annali di Matematica Pura ed Applicata, 125 (1980), 279–295.

30. "Existence of C^∞ solutions of the Euler equations for non–homogeneous fluids" (joint paper with A. Valli). Communications in Partial Differential Equations, vol. 5 (1980), 95–107.

31. "Un théorème d'existence dans la dynamique des fluids compressibles". Comptes Rendus Academie des Sciences de Paris, tome 289 serie B (1979), 297–299.

32. "On the barotropic motion of compressible perfect fluids". Annali Scuola Normale Superiore di Pisa, vol. 8 (1981), 317–351.

33. "On the motion of nonhomogeneous fluids in presence of diffusion" (joint paper with R. Serapioni and A. Valli). Journal of Mathematical Analysis and Applications, vol. 85 (1982), 179–191.

34. "Homogeneous and non–homogeneous boundary value problems for first order linear hyperbolic systems arising in fluid–mechanics" (Part I). Communications in Partial Differential Equations, vol. 7 (1982), 1135–1149.

35. "Homogeneous and non–homogeneous boundary value problems for first order linear hyperbolic systems arising in fluid–mechanics" (Part II). Communications in Partial Differential Equations, vol. 8 (1983), 407–432.

36. "On the solutions in the large of the two–dimensional flow of a non–viscous incompressible fluid". Journal of Differential Equations, vol. 54 (1984), 373–389.

37. **"Diffusion on viscous fluids. Existence and asymptotic properties of solutions". Annali Scuola Normale Superiore di Pisa, vol. 10 (1983), 341–355.**

38. **"On the suitable weak solutions to the Navier–Stokes equations in the whole space; Journal de Mathématiques Pures et Appliquées, vol. 64 (1985), 77–86.**

39. **"On the suitable weak solutions of the Navier–Stokes equations via a general approximation theorem". Journal de Mathématiques Pures et Appliquées, vol. 64 (1985), 321–334.**

40. **"Local energy inequality and singular set of weak solutions of the boundary non–homogeneous Navier–Stokes problem", in the volume "Current Topics in Partial Differential Equations", Kinokuniya, Tokyo 1986, dedicated to Professor S. Mizohata in occasion of his sixtieth anniversary.**

41. **"On the stationary motion of granulated media". Rendiconti del Seminario Matematico dell'Università di Padova, vol. 77 (1987), 243–253.**

42. **"Existence and asymptotic behaviour for strong solutions of the Navier–Stokes equations in the whole space". Indiana University Math. Journal, vol. 36 (1987), 149–166.**

43. **"L^p–stability for the strong solutions of the Navier–Stokes equations in the whole space" (joint paper with P. Secchi). Archive for Rational Mechanics and Analysis, vol. 98 (1987), 65–69.**

44. **"Stationary motion and the incompressible limit for compressible viscous flows". Houston J. of Mathematics, vol. 13 (1987), 527–544.**

45. **"An L^p–theory for the n–dimensional, stationary compressible, Navier–Stokes equations, and the incompressible limit for compressible fluids. The equilibrium solutions". Communications in Mathematical Physics, vol. 109 (1987), 229–248.**

46. **"On a stationary transport equations". Ann. Univ. Ferrara, vol. 32 (1986), 79–91.**

47. **"Existence results in Sobolev spaces for a stationary transport equation". Ricerche di Matematica, vol. 36 (1987) – Supplemento in ricordo di C. Miranda, pag. 173–184.**

48. **"Boundary–value problems for a class of first order partial differential equations in Sobolev spaces and applications to the Euler flow". Rend. Sem. Mat. Univ. Padova, vol. 79 (1988), 247–273.**

49. **"Kato's perturbation theory and well-posedness for the Euler equations in bounded domains". Archive Rational Mechanics and Analysis, vol.**

104 (1988), 367–382.

50. "An well–posedness theorem for non–homogeneous inviscid fluids via a perturbation theorem". J. Diff. Equations, vol. 78 (1989), 308–319.

51. "Long time behaviour for one dimensional motion of a general barotropic viscous fluid". Archive Rat. Mech. Analysis, vol. 108 (1989), 141–160.

52. "The stability of one dimensional stationary flows of compressible viscous fluids". Annales de l'Institut Henri Poincaré, Analyse non lineaire, vol. 7 (1990), 259–268.

53. "Attracting properties for one dimensional flows of a general barotropic viscous fluid. Periodic solutions". Annali Mat. Pura Applicata, vol. 161 (1992), 153–165.

54. "Periodic solutions for a class of autonomous Hamiltonian systems". Rendiconti Sem. Mat. Univ. Padova, vol. 83 (1990), 183–192.

55. "On the existence theorem for the barotropic motion of a compressible inviscid fluid in the half–space", Annali Mat. Pura Applicata, vol. 163 (1993), 265–289.

56. "Data dependence in the mathematical theory of compressible inviscid fluids", Arch. Rat. Mech. Analysis, vol. 119 (1992), 109–127.

57. Perturbation theory and well–posedness in Hadamard's sense of hyperbolic initial–boundary value problems", Nonlinear Analysis: TMA, vol. 22 (1994), 1285–1308.

58. "Perturbation theorems for linear hyperbolic mixed problems and applications to the compressible Euler equations", Communications on Pure Applied Mathematics vol. 46 (1993), 221–259.

59. "Structural stability and data dependence for fully nonlinear hyperbolic problems", Arch. Rat. Mech. Analysis, vol. 120 (1992), 51–60.

60. "The initial–boundary value problem for the non–barotropic compressible Euler equations: structural–stability and data dependence", Ann. Inst. H. Poincaré, Anal. non lineaire, vol. 11 (1994), 297–311.

61. "On the singular limit for slightly compressible fluids", Calc. Var., vol. 2 (1994), 205–218.

62. "On the existence of branches of time–periodic solutions to the nonlinear vibrating string equation", Nodea, vol. 1 (1994), 125–148.

63. "On the sharp singular limit for slightly compressible fluids", Math. Methods Appl. Sciences, 18 (1995), 295–306.

64. "Singular limits in fluid dynamics", Rend. Sem. Mat. Univ. Padova, 94 (1995), 55–69.

65. "Singular limits in compressible fluid dynamics", Arch. Rat. Mech. Analysis, 128 (1994), 317–327.

66. "On the periodic solutions to the Kirchhoff–Bernstein nonlinear wave equation", Atti Sem. Mat. Fis. Univ. Modena, 44 (1996), 295–301.

67. "Remarks on the flow of holes and electrons in crystalline semiconductors", in Navier–Stokes Equations and Related Nonlinear Problems", A. Sequeira Ed., Plenum–Press (1995), 291–306.

68. "On some diffusion equations in semiconductor theory", C.R. Acad. Sci. Paris, t. 320, serie I (1995), 1193–1197.

69. "On the semiconductor drift diffusion equations", Diff. Int. Equations, 9 (1996), 729–744.

70. "Long time behaviour of the solutions to the Navier–Stokes equations with diffusion", Nonlinear Analysis: TMA, 27 (1996), 1229–1239.

71. "Concerning the regularity problem for the solutions of the Navier–Stokes equations", C.R. Acad. Sc. Paris, t. 321, serie I, (1995), 405–408.

72. "A new regularity class for the Navier–Stokes Equations in $\mathbb{R}^n$", Chinese Annals of Math., 16 B: 4(1995), 1–6.

73. "A new approach to the L^2–regularity theorems for linear stationary nonhomogeneous Stokes systems", Portugalie Math., 54 (1997), 271–286.

74. Remarks on the smoothness of the $L^\infty(0,T;L^3)$ solutions to the Navier–Stokes equations", Portugalie Math., 54 (1997), 381–391.

75. "Concerning the regularity of the solutions to the Navier–Stokes equations via the truncation method; Part I", Diff. Int. Equations, 10 (1997), 1149–1156.

76. "Concerning the regularity of the solutions to the Navier–Stokes equations via the truncation method; Part II", in "Équations aux Derivées Partielles et Applications", Articles dédiés à J.–L. Lions, Gauthier–Villars, Paris (1998), 127–138.

77. "A sufficient condition on the pressure for the regularity of weak solutions to the Navier–Stokes equations", Journal of Math. Fluid Mechanics, 2 (2000), 99–106.

78. "On the smoothness of a class of weak solutions to the Navier-Stokes equations", Journal of Math. Fluid Mechanics, 2 (2000), 315-323.

79. "On the regularizing effect of the vorticity direction in incompressible viscous flows", (joint paper with L.C. Berselli),Diff. Int. Equations, 15

(2002), 345-356.

80. **"On the existence of strong solutions to a coupled fluid-structure evolution problem", Journal of Math. Fluid Mechanics, 6 (2004), 21–52.**
81. **"Vorticity and smoothness in viscous flows", in Nonlinear Problems in Mathematical Physics and Related Topics, in Honor of O.A. Ladyzhenskaya, International Mathematical Series, Vol.2, Kluwer Academic, London (2002), 61-67.**
82. **"Developable surfaces as generators of the isobaric solutions to the Euler equations", Journal of Math. Fluid Mechanics, 6 (2004), 430–438.**
83. **"Regularity of solutions to a non homogeneous boundary value problem for general Stokes systems in $\mathbb{R}^n_+$", Math. Annalen, 331 (2005), 203-217.**
84. **"Regularity for Stokes and generalized Stokes systems under non homogeneous slip type boundary conditions", Advances in Differential Equations, 9, (2004), no.9-10, 1079-1114.**
85. **"On the regularity of flows with Ladyzhenskaya shear dependent viscosity and slip and non-slip boundary conditions", Communications Pure Applied Mathematics, 58 (2005), 552-577.**
86. **"Time-periodic solutions of the Navier-Stokes equations in unbounded cylindrical domains. Leray's problem for periodic flows ", Archive Rational Mechanics and Analysis, 178 (2005), 301-325.**

86-bis. **"Erratum to: Time-periodic solutions of the Navier-Stokes equations in unbounded cylindrical domains. Leray's problem for periodic flows ", Archive Rational Mechanics and Analysis, 198 (2010), 1095.**

87. **"Concerning time-periodic solutions of the Navier-Stokes equations in cylindrical domains under Navier boundary conditions", J. Partial Differential Equations 19,(2006), 369-376.**
88. **"Vorticity and regularity for viscous incompressible flows under the Dirichlet boundary condition. Results and related open problems", Journal of Math. Fluid Mechanics, 9 (2007), 506-516.**
89. **"Vorticity and regularity for flows under the Navier boundary condition", Comm. Pure Applied Analysis, 5 (2006), 907-918.**
90. **"Remarks on the Navier-Stokes equations under slip type boundary conditions with linear friction", Portugaliae Math.,64 (2007), 377-387.**
91. **"Navier-Stokes equations with shear thickening viscosity. Regularity up to the boundary", Journal of Math. Fluid Mechanics, 11 (2009), 233-257.**
92. **"Navier-Stokes equations with shear thinning viscosity. Regularity up to**

the boundary", Journal of Math. Fluid Mechanics, 11 (2009), 258-273.

93. **"On the Ladyzhenskaya-Smagorinsky turbulence model of the Navier-Stokes equations in smooth domains. The regularity problem", J. Eur. Math. Soc., 11 (2009), 127-167.**
94. **"Concerning the Ladyzhenskaya-Smagorinsky turbulence model of the Navier-Stokes equations.", Comptes Rendus Acad. Sc. Paris, 345, issue 5, September 2007, 249-252.**
95. **"Navier-Stokes equations: Green's matrices, vorticity direction, and regularity up to the boundary", (joint paper with L.C. Berselli),J. Diff. Equations, 246 (2009), 597-628.**
96. **"On non-Newtonian p-fluids. The pseudo-plastic case", Journal Math. Anal. Appl., 344(2008), 175-185.**
97. **"Turbulence models, $p-$ fluid flows and $W^{2,l}$ regularity of solutions", Comm. Pure Applied Analysis, 8 (2009), 769-783.**
98. **"On the global regularity of shear-thinning flows in smooth domains", J. Math. Anal. Appl. 349 (2009), 335-360.**
99. **"A review on some contributions to perturbation theory, singular limits and well-posedness", Journal Math. Anal. Appl., 352 (2009), 271-292.**
100. **"On the global integrability, for any finite power, of the full gradient for a class of generalized power law models, $p < 2$", Advances in Mathematical Fluid Mechanics, (2010), 37-42, R.Rannacher, A. Sequeira (eds.), Springer-Verlag Berlin Heidelberg, 2010.**
101. **"On the sharp vanishing viscosity limit of viscous incompressible fluid flows", Kazhikhov's Memorial Volume: New Directions in Mathematical Fluid Mechanics, book series Advances in Mathematical Fluid Mechanics, 113-122, Birkhäuser Verlag Basel, 2009.**
102. **"Boundary regularity of shear thickening flows", (joint paper with Kaplicky, P. and Ruzicka, M.),J. Math. Fluid Mech., 13 (2011), 387-404.**
103. **"Sharp inviscid limit results under Navier type boundary conditions. An L^p theory", (joint paper with F. Crispo), J. Math. Fluid Mech., 12 (2010), 397-411.**
104. **"A challenging open problem: The inviscid limit under slip-type boundary conditions". Special volume dedicated to Prof. Solonnikov -Discrete and Continuous Dynamical Systems Series S,Vol.3, Number 2, June 2010, p.p. 231-236.**
105. **"Concerning the $W^{k,p}(\Omega)$-inviscid limit for 3-D flows under a slip boundary condition", (joint paper with F. Crispo), J. Math. Fluid Mech., 13**

(2011), 117-135.

106. **"Regularity theorems, up to the boundary, for shear-thickening flows", (joint paper with Kaplicky, P. and Ruzicka, M.), Comptes Rendus Acad. Sc. Paris, Ser.1, 348 (2010), 541-544.**
107. **"Reducing slip boundary value problems from the half to the whole space. Applications to inviscid limits and to non-Newtonian fluids", (joint paper with F. Crispo and C.R. Grisanti), J. Math. Anal. Appl., 377 (2011), 216-227.**
108. **"On the global regularity for nonlinear systems of the p-Laplacian type", (joint paper with F. Crispo), Discrete and Continuous Dynamical Systems Series S,6 (2013), 1173-1191. arXiv:1008.3262v1 [math.AP] 19 Aug 2010.**
109. **"The 3-D inviscid limit result under slip boundary conditions. A negative answer", (joint paper with F. Crispo), J. Math. Fluid Mech., 14 (2012), 55-59.**
110. **"A missed persistence property for the Euler equations, and its effect on inviscid limits", (joint paper with F. Crispo), Nonlinearity, 25 (2012) 1661-1669.doi: 10.1088/0951-7715/25/6/1661. arXiv:1011.1117v2 [math.AP] 5 Nov 2010.**
111. **"On the global $W^{2,q}$ regularity for nonlinear systems of the $p-$Laplacian type in n space variables", (joint paper with F. Crispo), Nonlinear Analysis-TMA, 75 (2012), 4346-4354. DOI: 10.1016/j.na.2012.03.021**
112. **"Direction of vorticity and regularity up to the boundary: On the Lipschitz-continuous case", J. Math. Fluid Mech., 15 (2013), 55-63. DOI: 10.1007/s00021-012-0099-9.**
113. **"Viscous incompressible flows under stress-free boundary conditions. The smoothness effect of near orthogonality or near parallelism between velocity and vorticity", Bollettino UMI, (9) V (2012), 225-232.**
114. **"On the global regularity for singular p-systems under non-homogeneous Dirichlet boundary conditions", J. Math. Anal. Appl., 398 (2013) 527-533. doi: 10.1016/j.jmaa.2012.08.058.**
115. **"On nonlinear potential theory, and regular boundary points, for the p-Laplacian in N space variables, Adv. Nonlinear Anal., 3(2014), 45-67. DOI: 10.1515/anona-2013-0036.**
116. **"Direction of vorticity and smoothness of viscous fluid flows subjected to boundary constraints", Acta Appl. Math., 132 (2014), 63-71. DOI 10.1007/s10440-014-9891-2.**

117. **“ Concerning the existence of classical solutions to the Stokes system. On the minimal assumptions problem.”, J. Math. Fluid Mech., 16 (2014), 539-550. DOI: 10.1007/s00021-014-0170-9.**

118. **“ On a family of results concerning direction of vorticity and regularity for the Navier-Stokes equations.”, Annal. Univ. Ferrara, 60 (2014), 23-34. DOI 10.1007/s11565-014-0206-3.**

119. **“ On singular parabolic p-Laplacian systems under non-smooth external forces. Regularity up to the boundary.”, Proc. St. Petersburg Math. Soc., Vol.XV: Advances in Mathematical Analysis of Partial Diff. Equations, Amer. Math. Soc. Transl., Series 2- Vol. 232 (2014), pp. 1-10.**

120. **“ Classical solutions to the two-dimensional Euler equations and elliptic boundary value problems, an overview”, in ”Recent Progress in the Theory of the Euler and Navier-Stokes Equations”, 1-21, London Math. Soc. Lecture Notes Ser.430, Cambridge University Press, Cambridge, 2016.**

121. **“On some regularity results for the stationary Stokes system, and the $2-D$ Euler equations”, Portugaliae Math., 72 (2015), 285-307. DOI 10.4171/PM/1969.**

122. **“Elliptic boundary value problems in spaces of continuous functions”, Discrete and Continuous Dynamical Systems, Series S, Vol.9, N.1 February 2016, pp. 43-52. Doi:10.3934/dcdss.2016.9.43.**

123. **“Moduli of continuity, functional spaces, and elliptic boundary value problems. The full regularity spaces $C^{0,\lambda}_{\alpha}(\overline{\Omega})$ ”, Adv. Nonlinear Anal., 7(1), (2018), 15-34. DOI: 10.1515/anona-2016-0041.**

124. **“On the singular $p-$Laplacian system under Navier slip type boundary conditions: The gradient-symmetric case ”, in Recent Developments of Mathematical Fluid Mechanics, Advances in Mathematical Fluid Mechanics series, p.p. 99–109. Birkhäuser, 2016. Volume dedicated to Y. Shibata in the occasion of his 60th birthday.**

125. **“On the extension to slip boundary conditions of a Bae and Choe regularity criterion for the Navier-Stokes equations. The half-space case ”, J. Math. Anal. Appl., 453 (2017), 212–220.**

126. **“On the truth, and limits, of a full equivalence $\mathbf{p \cong v^2}$ in the regularity theory of the Navier-Stokes equations. A point of view”, J. Math. Fluid Mech., 20 (2018), 889–898. DOI 10.1007/s00021-018-0377-2.**

127. **“Navier-Stokes equations: Some questions related to the direction of the vorticity”, Discrete and Continuous Dynamical Systems, Series S,**

Vol.12, N.2, April 2019, 203-213. doi10.3934/dcdss.2019014.

128. **"On a two components condition for regularity of the $3D$ Navier-Stokes equations under physical slip boundary conditions on non-flat boundaries", (joint paper with Josef Bemelmans and Johannes Brand), Mathematische Annalen (2019) 374: 1559-1596. https:// doi.org/10.1007/s.00208-018-1755-z.**
129. **"Regularity criteria for Navier-Stokes equations with slip boundary conditions on non-flat boundaries via two velocity components", (joint paper with Jiaqi Yang), Adv. Nonlinear Anal., 9 (2020), no.1, 633-643.**
130. **" On the energy equality for solutions to Newtonian and non-Newtonian fluids", (joint paper with Jiaqi Yang), Nonlinear Analysis, 185 (2019), 388-402. arXiv:1901.02277v1 [math.AP] 8 JAN 2019.**
131. **" On the Shinbrot's criteria for energy equality to Newtonian fluids: A simplified proof, and an extension of the range of application", (joint paper with Jiaqi Yang), Nonlinear Analysis, 196 (2020), 111809.**
132. **" Onsager's Conjecture for the Incompressible Euler Equations in the Hölog Spaces $C^{0,\alpha}_{\lambda}(\bar{\Omega})$ ", (joint paper with Jiaqi Yang), J. Math. Fluid Mech., 22 (2020),no.2, 22–27.**
133. **" On the partial regularity of suitable weak solutions in the non-Newtonian shear-thinning case ", (joint paper with Jiaqi Yang), Nonlinearity, 34 (2021), 562–577.**
134. **" On mixed pressure-velocity regularity criteria to the Navier-Stokes equations in Lorentz spaces ", (joint paper with Jiaqi Yang), Chinese Ann. Math., Series B, 42(1),(2021),1-16.**
135. **"On mixed pressure-velocity regularity criteria to the Navier-Stokes equations in Lorentz spaces, Part II: The non-slip boundary value problem", (joint paper with Jiaqi Yang), Chin. Ann. Math., Serie B 43(1) 2022,51-58, DOI:10.1007/s11401-022-0001-z.**
136. **"Navier-Stokes equations under slip boundary conditions: Lower bounds to the minimal amplitude of possible time-discontinuities of solutions with two components in $L^{\infty}(L^3)$", (joint paper with Jiaqi Yang), Sci China Math, (2022), 65: 2099–2122. https://doi.org/10.10077s 11425-021-1862-0.**
137. **"Fully developed, doubly periodic, viscous flows in infinite space-periodic pipes under general time-periodic total fluxes", (joint paper with Jiaqi Yang), J. Math.Physics, (2023), 64, no.1.**
138. **"A survey on some vanishing viscosity limit results.", (joint paper with**

F. Crispo), Adv.Nonlinear Anal., (2023); 12: 20220309.

139. **"Imposing slip conditions on curved boundaries for $3D$ incompressible flows with a very high-order accurate finite volume scheme on polygonal meshes", (joint paper with Ricardo Costa, Stéphane Clain, Gaspar J. Machado, João M. Nóbrega, and Francesca Crispo), Comput. Methods Appl. Mech. Engrg., 415, (2023), 116274.**
140. **"On the energy equality for the evolution Navier-Stokes equations ", (joint paper with Jiaqi Yang), St. Petersburg Math. Journal, 36 (2025) N.3. Russian edition: Algebra and Analysis, 36, (2024), 5–21.**
141. **"The relations between Hölder continuity assumptions on the direction of vorticity and energy inequality ", (joint paper with Jiaqi Yang), J. Geom. Anal.35,15(2025),no.1. Published on line: 14 Nov.2024.**
142. **"A note on the development of singularities on solutions to the Navier-Stokes equations under super critical forcing terms", (joint paper with Jiaqi Yang), Opuscula Mathematica, accepted.**

SOME SUPPLEMENTARY PUBBLICATIONS

- **"On the Euler equations for non–homogeneous ideal incompressible fluids", in Recent contributions to Nonlinear Partial Differential Equations, Research Notes in Math., vol. 50 Pitman (1981), Eds. H. Berestycki, H. Brezis.**
- **"On the motion of viscous fluids with diffusion", in "Semigroups, Theory and Applications", vol.I Pitman Research Notes in Mathematics Series, vol. 141, eds. H. Brezis, M.G. Crandall, F. Kappel (1986).**
- **"Existence and asymptotic behaviour for strong solutions of the Navier–Stokes equations in the whole space", in Dynamical problems in Continuum Physics, IMA volumes in Mathematics and its Applications, vol. 4, Springer – Verlag (1987), eds. J.L. Bona, C. Dafermos, J.L. Ericksen, D. Kinderlehrer.**
- **"On a linear non–elliptic system concerning the dynamic of stationary motions". Rend. Sem. Mat. Fis. Milano, vol. 56 (1986).**
- **"On the incompressible limit of the compressible, Navier–Stokes equations", in the volume in honour of Prof. H. Lewy, Lecture Notes in Mathematics, vol. 1340 (Calculus of Variations and Partial Differential Equations), Springer – Verlag (1988), eds. S. Hildebrandt, D. Kinder-**

lehrer. M. Miranda.

- **"On the well–posedness of the Euler flow in bounded domains", in Notes and Reports in Mathematics in Science and Engineering, vol. 6 (Advances Topics in the theory of Dynamical Systems), Academic Press 1989, eds. G. Fusco, M. Iannelli, L. Salvadori.**
- **"Well–posedness and singular limits in the theory of compressible inviscid fluids", in Mathematical Analysis of Phenomena in Fluid and Plasma Dynamics", Research Institute for Mathematical Sciences, RIMS Kokyuroku 824, Kyoto (1993).**
- **"Well–posedness of nonlinear hyperbolic problems and the dynamics of compressible fluids", in Notes on Numerical Fluid Mechanics, vol. 43, A. Donato and F. Olivieri Eds., Vieweg, 1993.**
- **"On the L^2–regularity theorems for a family of Stokes type systems", in Proceedings of the Conference "Nonlinear Evolution Equations and Infinite–Dimensional Dynamical Systems", Word Scientific 1997, ed. Li Ta–tsien.**
- **"Vorticity and smoothness in viscous flows", in Nonlinear Problems in Mathematical Physics and Related Topics II, International Math. Series, Volume in Honor of Professor O.A. Ladyzhenskaya, edited by Birman, Solonnikov, Hildebrandt and Uraltseva, Kluwer Academic/Plenum Publishers, New York, 2002.**
- **"Vorticity and smoothness in incompressible viscous flows", in Wave Phenomena and Asymptotic Analysis, volume dedicated to Professors M. Ikawa and S. Miyatake on the occasion of their 60th anniversary, RIMS Kokyuroku 1315, Kyoto, 2003, pages 37–42.**
- **"On some boundary value problems for flows with shear dependent viscosity", in Variational Analysis and Applications, volume dedicated to the memory of Professors G.Stampacchia and J.L. Lions, F.Giannessi and A.Maugeri Editors, Springer 2005, pages 161–172.**
- **"Vorticity and regularity for solutions of initial-boundary value problems for the Navier-Stokes equations", Proceedings of the Conference "Partial Differential Equations and Applications", Ferrara (2005). In Hyperbolic Problems and Regularity Questions, Trends in Mathematics, (2006), 39-47. Birkhäuser, Verlag Basel/ Switzerland.**
- **"Vorticity and smoothness in incompressible viscous flows. Boundary value problems", Proceedings of the Conference "Kyoto Conference on the Navier-Stokes Equations and their Applications", RIMS Kokyuroku**

Bessatsu, Vol. B1, pages 71–77. Y. Giga, H. Kozono, H. Okamoto, Y. Shibata, editors. Kyoto, 2007.

- **"On singular parabolic p-Laplacian systems under non-smooth external forces. Regularity up to the boundary", in Advances in Mathematical Analysis of PDEs, Dedicated to the memory of O.A. Ladyzhenskaya, Proc. St. Petersburg Math. Soc. XV; AMS Transl. Series 2. 232 (2014), D. Apushkinskaya and A. Nazarov, Editors.**
- **"Vorticity Direction and Regularity of Solutions to the Navier-Stokes Equations", in collaboration with Y. Giga and Z. Grujić. in Handbook of Mathematical Analysis in Mechanics of Viscous Fluids, 901-932, Springer, Cham, 2018.**

EDITOR

- **Editor of the volume "Fluid Dynamics", Lecture Notes in Mathematics, vol. 1047, Springer – Verlag (1984).**
- **Editor (with Li Ta–Tsien) of the volume "Qualitative Aspects and Applications of Nonlinear Evolution Equation", Word Scientific (1994).**
- **Editor (with A. Sequeira and J.H. Videman) of the volume "Applied Nonlinear Analysis" in honor of the 70th birthday of Prof. J. Necas, Kluwer Academic/Plenum Publishers, New York, 1999.**