Daniele Cassani

Curriculum Vitae

Professional experience

2023–Present **Full Professor of Mathematical Analysis** - Department of Science and High Technology, Università degli Studi dell'Insubria.

2016–Present **President of RISM** - Riemann International School of Mathematics. Scientific Board: L. Ambrosio (SNS - Pisa), E. Bombieri (IAS), S.-Y. A. Chang (Princeton Univ.), R. Donagi (Univ. Pennsylvania), I. Ekeland (Univ. Paris Dauphine), M. Hairer (EPFL and Imperial College - London), A. Quarteroni (Politecnico Milano & EPFL), T. Tao (UCLA). *L. Nirenberg*† *2014-2020 (CIMS - NYU),* `https://www.rism.it`

2019–Present **Member of the Board of Directors** of the Fondazione Marcello Morandini, `https://www.fondazionemarcellomorandini.com`

2023–2025 **CEO** of Fondazione Università dell'Insubria.

2018–2023 **Member of the Board of Directors** of the Università degli Studi dell'Insubria.

Institutional appointments:

2023–2025 **Member of the Riemann Prize Committee** with Martin Hairer and Terence Tao, `https://www.riemannprize.com`

2019–2022 **Member of the Riemann Prize Committee** with E. Bombieri, S.-Y. A. Chang, R. Donagi and L. Nirenberg† (2019-2020).

2019–2023 **PI** of the co-funded project RISM–Università degli Studi dell'Insubria and Regione Lombardia, *Riemann Prize e Lombardia è Ricerca*.

2018–2025 **Member of the Managing Board** of the *Seminario Matematico e Fisico di Milano*, `https://www.mate.polimi.it/smf`.

2014–Present **Member of the Managing Board** of Ph.D. School in *Computer Science and Computational Mathematics*, Università degli Studi dell'Insubria.

2024 **Member of the committee** for a Full Professor position at University S.Raffaele, Roma.

President of the committee for a tenured Researcher RTT position at University of Insubria.

2020 **President of the committee** for a Researcher RTD-a) position at University of Insubria.

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https://www.uninsubria.it/hpp/daniele.cassani – https://www.rism.it

2017 **Member of the committee** for a Associate Professor position at University of Campania "Luigi Vanvitelli", Caserta.

Scientific appointments:

2025 **Invited participant** to NATO 2025 Summit - Public Forum, The Hauge.

2024 **Visiting Professor**, Chongqing Jiaotong University, Shaanxi Normal University, Central China Normal University, Wuhan Normal University, China University of Geosciences, Zhejiang Normal University, Hunan University of Technology and Business, South China University of Technology, South China Normal University.

2017–2023 **Associate Professor of Mathematical Analysis** - Department of Science and High Technology, Università degli Studi dell'Insubria.

2019–2020 **Visiting Professor**, College of Mathematics and Statistics, Chongqing Jiaotong University, Chongqing - China.

2017–2018 **Visiting Professor**, Centro de Matemática, Applicações Fundamentais e Investigação Operacional, Universidade de Lisboa.

2012–2017 **Senior Research Fellow**, Department of Science and High Technology, Università degli Studi dell'Insubria.

2016 **Visiting Professor**, Zhejiang Normal University, Jinhua - China.

Visiting Professor, Osaka City University - Japan.

2013 **Visiting Professor**, Pontifícia Universidade Católica do Rio de Janeiro - Brazil.

2007–2011 **Lecturer**, Department of Mathematics, Politecnico di Milano.

Postdoctoral Research Fellow, Department of Mathematics, Università degli Studi di Milano.

2007 **Visiting Professor**, Universidade Federal de Paraiba, Joao Pessoa - Brazil.

2006–2007 **Postdoctoral Research Fellow**, PIMS - Pacific Institute for the Mathematical Sciences, Director: Prof. Ivar Ekeland, Supervisor: Prof. Nassif Ghoussoub, University of British Columbia, Vancouver - Canada.

2001–2005 **PhD Scholarship**, Università degli Studi di Milano.

Other appointments:

1995–2000 Professional photographer, international experience.

Education

2006 **Ph.D. in Mathematics**, *Università degli Studi di Milano*, Advisor: Prof. Bernhard Ruf, Dissertation: *Nonlinear elliptic systems with critical growth*, Lambert Academic Publishing (2010), 70 pp

2001 **Master's Degree in Mathematics**, *Università degli Studi di Milano*, Summa cum laude

Selected talks (in person)

2026 *Maximum principle for higher order operators and applications to nonlinear PDEs*, Brazil-Italy in Mathematics - Università di Messina.

Existence of multi-bubbling solutions for a critical Hartree type equation, SS123 - AIMS Confrence 2026, Athens.

Maximum principle for higher order operators and applications to nonlinear PDEs, SS7 - AIMS Confrence 2026, Athens.

2025 *A new Harnack type inequality and applications*, University of Napoli Federico II.

Normalized solutions to NLS equations in dimension two, XIII Workshop in Nonlinear Differential Equations - Modena.

Some new insights on the Maximum Principle for elliptic operators, University of Pisa.

Normalized solutions to NLS equations in dimension two, University of Modena and Reggio Emilia.

2024 *Maximum Principle for higher order operators: a tribute to Patrizia Pucci*, 2 Nonlinear Days, University of Perugia.

The fractional Sobolev limiting case for nonlocal Schrödinger-Poisson systems in $\mathbb{R}^N$, University of Milano.

Limiting cases for Choquard type equations in $\mathbb{R}^N$, Two nonlinear days in Urbino 2024, University of Urbino.

Fine bounds for best constants in subcritical Sobolev's embeddings and applications, 14^{th} AIMS Conference SS73, NYU Abu-Dhabi.

Limiting cases in Choquard type equations and Schrödinger-Poisson systems, 14^{th} AIMS Conference SS117, NYU Abu-Dhabi.

Fine bounds for best constants in subcritical Sobolev's embeddings and applications, South China Normal University, Guangzhou.

The Maximum Principle for higher order elliptic PDEs, Central China Normal University - Wuhan.

Normalized solutions to NLS equations in dimension two, South China University of Technology - Guangzhou.

Fine bounds for best constants in subcritical Sobolev's embeddings and applications, Shaanxi Normal University, Xi'an.

Mathematics in the real world: Technology, Art and Innovations, Chongqing Jiaotong University.

Limiting cases in Schrödinger-Poisson systems, Hunan University of Technology and Business - Changsha.

On the principle of equivalence in functional inequalities, Zhejiang Normal University - Jinhua.

On the equations of MEMS, China University of Geosciences - Wuhan.

On the principle of equivalence in functional inequalities, Wuhan University of Technology.

2023 *Mathematics and Innovation*, Recent Advances in Applied Sciences, Bucharest.

Mathematics and Innovation: let the paintings play, Academia das Ciências de Lisboa.

On the Maximum Principle for higher order operators, Universidade de Lisboa.

Maximum Principle for higher order operators in general domains and any dimension, XII Workshop on Nonlinear Differential Equations, Brasilia.

Matematica e Innovazione, Rotary Club 1928 Varese.

Matematica, Innovazione e Trasferimento Tecnologico, Ordine Ingegneri Provincia di Varese.

2022 *Limiting cases in Choquard type equations*, Portugal-Italy Conference on Nonlinear Differential Equations and Applications - Evora, Portugal.

Some new insights on the Maximum Principle for Higher Order Operators, Mostly Maximum Principle, Scuola Normale Superiore - Cortona.

Higher order fractional Schrödinger–Newton systems: logarithmic kernel vs exponential nonlinearity, Univ. Modena e Reggio Emilia - Modena.

Schrödinger–Newton systems via log-weighted Pohozaev–Trudinger inequalities, Univ. Tor Vergata - Roma.

2020 *Bose-Einstein systems in dimension two*, Workshop on Nonlinear PDEs and Applications, University of Perugia.

La Matematica nel mondo reale, L'influenza di Leonardo Pisano nell'arte, nella matematica, nella scienza e nell'economia, Chiasso.

2019 *Nonlinear Systems of Elliptic PDEs and Applications*, China-Italy Conference on Partial Differential Equations and Their Applications, Fudan University, Shanghai, China.

Bose fluids and weakly coupled systems in dimension two, Chongqing Jiaotong University, China.

Bose fluids and positive solutions to weakly coupled elliptic system in the plane, Università di Roma la Sapienza.

2018 *New Critical Phenomena in Nonlinear Nonlocal Schrödinger Equations*, Recent Advances in Nonlinear Analysis, CIRM Levico Terme - Trento.

Choquard type equations with Hardy-Littlewood-Sobolev upper- and lower-critical growth, Università di Roma la Sapienza.

Critical aspects of Choquard type equations, Politecnico di Milano.

2017 *Critical and supercritical Hamiltonian systems of Schrödinger equations in dimension two*, Two-day meeting on PDEs, Perugia.

Critical and supercritical Hamiltonian systems of Schrödinger equations in dimension two, Mostly Maximum Principle, BIRS, Banff - Canada.

Nonlocal MEMS equations: from direct to inverse problems and back, Alfredo Lorenzi Analysis Seminar, University of Milano.

Nonlocal near to local MEMS equations, International Conference on Elliptic and Parabolic Problems, Gaeta.

Nonlocal Schrödinger equations with Hardy-Littlewood-Sobolev critical exponents, X Workshop on Nonlinear Differential Equations, University of Brasilia.

Choquard type equations with H-L-S critical growth, CMAF-CIO, Lisbon.

2016 *A priori estimates and semiclassical ground states for systems of critical Schrödinger equations in* $\mathbb{R}^2$, Zhejiang Normal University, Jinhua, China.

A nonlocal Schrödinger equation in dimension two, Osaka City University, Japan.

2015 *Pohozaev-Trudinger-Moser type inequalities via Zygmund spaces*, AMS, Spring Western Sectional Meeting, University of Nevada, Las Vegas.

Supercritical systems of Schrödinger equations in dimension two, Courant Institute of Mathematical Sciences, New York University.

Hamiltonian systems of Schrödinger equations with supercritical exponential growth, Università di Pisa.

2014 *Direct and inverse problems related to MEMS*, PDE's, Inverse Problems and Control Theory, Università degli Studi di Bologna.

Singular nonlinearities in PDE and applications to MEMS, AIMS Conference in Dynamical Systems, Differential Equations and Applications, Madrid.

Moser type inequalities in the whole plane and the zero mass case, AIMS Conference in Dynamical Systems, Differential Equations and Applications, Madrid.

2013 *Supercritical elliptic systems of Schrödinger equations in dimension two*, Università Mediterranea, Reggio Calabria.

2012 *A new insight into Moser's inequality, Workshop on Nonlinear Differential Equations*, Universidade Federal de Paraiba, Joao Pessoa, Brazil.

Group invariance and Pohozaev identity in Moser type inequalities, Workshop on Nonlinear Partial Differential Equations, Università degli Studi di Perugia.

2011 *A Moser inequality for the* $1-$*bilaplacian*, Workshop on nonlinear PDEs and functional inequalities, Universidad Autonoma de Madrid.

Moser inequalities in Zygmund spaces, Università di Catania.

2010 *Borderline cases for second order Moser type inequalities*, Institut für Mathematik, Universität Basel.

On the L^1-*borderline case for second order Moser type inequalities*, Università degli Studi di Milano Bicocca.

Fourth order PDE with singular nonlinearities and applications to MEMS, Università di Pisa.

2008 *On a Moser inequality in Lorentz-Sobolev spaces and applications to elliptic systems in* $\mathbb{R}^N$, Università dell'Insubria, Como.

A Moser-type inequality in Lorentz-Sobolev spaces for unbounded domains, Liouville theorems and detours, Cortona.

2007 *Some function spaces new in PDE*, Workshop em Equações Differenciais Parciais, Universidade Federal de Pernambuco, Recife, Brazil.

2006 *Nolinear Elliptic Systems with Critical Growth*, PIMS seminars, University of British Columbia, Vancouver, Canada.

2005 *Remarks on a Serrin curve*, Scuola Normale Superiore, Pisa.

Chair teaching

2012–Present **Analisi Matematica A**, Università degli Studi dell'Insubria, School of Engineering, Ingegneria per la Sicurezza del Lavoro e dell'Ambiente - ISLA (Varese).

Analisi Matematica B, ISLA (Varese).

(Topics in) Advanced Analysis A (B), Università degli Studi dell'Insubria, Master's Degree in Mathematics (Como).

2013–2014 **PhD course** on "Calculus of Variations and Applications", consorzio interuniversitario Me.S.E., Reggio Calabria.

2012–2013 **Analisi di Fourier**, Master's Degree in Mathematics (Como).

2011–2012 **Analisi Matematica 1 e Geometria**, Politecnico di Milano, School of Engineering, Ingegneria Gestionale.

PhD course on "Nonlocal higher order problems and applications to MEMS", Università Mediterranea di Reggio Calabria.

2010–2011 **Analisi Matematica 2**, Politecnico di Milano, Ing. dell'Informazione.

Analisi Matematica II, Politecnico di Milano, School of Eng., Ing. Gestionale.

Analisi Matematica e Geometria 2, Politecnico di Milano, Ing. Aerospaziale.

2009–2010 **Analisi Matematica II**, Politecnico di Milano, School of Eng., Ing. Gestionale.

Equazioni Differenziali, Politecnico di Milano, Ing. Civile e Ambientale.

Analisi Matematica 1, Politecnico di Milano, Ing. dell'Informazione.

Precorso di Matematica, Politecnico di Milano, School of Eng.

2008–2009 **Equazioni Differenziali alle Derivate Parziali**, Politecnico di Milano, School of Eng., Graduate course, Ing. Civile e Ambientale.

2007–2008 **Equazioni Differenziali Ordinarie** Politecnico di Milano, Ing. Civile e Ambientale.

Analisi Matematica B Politecnico di Milano, Ing. Civile e Ambientale.

PhD course on "Lorentz spaces and PDE", Universidade Federal de Paraiba (Joao Pessoa, Brasile) and Universidade Federal de Pernambuco (Recife, Brasile).

2006–2007 **MATH 200/253** (Multivariable Calculus), University of British Columbia, Vancouver, Canada: 2 terms.

Other professional contributions

Postdoc supervision:

2021–2022 Dr. Zhisu Liu, Center for Mathematical Sciences, China University of Geosciences, Wuhan - China. Current position: Associate Professor in Mathematics

2019–2020 Dr. Youjun Wang, South China University of Technology. Current position: Associate Professor in Mathematics.

2019–2020 Dr. Luca Vilasi, Università di Messina. Current position: Research fellow in Mathematics.

2016–2018 Dr. Jianjun Zhang, College of Mathematics and Statistics, Chongqing Jiaotong University. Current position: Full Professor in Mathematics.

PhD supervision:

2025–Present Hangxin Wen, South China Normal University, *Co-advisor*.

Rui Zhu, Central South University - Changsha, *Co-advisor*.

2024–Present Giacomo Casartelli, Università degli Studi dell'Insubria, *Advisor*.

2023–Present Huang Ling, South China Normal University, *Co-advisor*.

2020–2024 Giuseppe Romanazzi, Università degli Studi di Padova, *Tutor*.

2019–2022 Lele Du, Zhejiang Normal University, *Advisor*.

2018–2022 Marco Tarsia, Università di Pisa, *Tutor*.

2016–2019 Delia Schiera, Università degli Studi dell'Insubria, *Advisor*. Current position: Research Fellow at University of Lisbon.

Organization of Scientific Events:

2026 **Organizer** of the third Riemann Prize Week, RISM - villa Toeplitz, Comune di Varese e Istituto Lombardo Accademia di Scienze e Lettere.

Organizer of the fourth INdAM-RISM Congress "Fractional Calculus, probability and nonlocal operators", RISM - villa Toeplitz, Varese.

2025 **Organizer** of the third INdAM-RISM Congress "Optimal Control and Inverse Problems in PDE Theory", RISM - villa Toeplitz, Varese.

Organizer of the meeting with Alain Connes "Due sguardi sullo spazio e sui numeri", RISM - villa Toeplitz e Comune di Varese.

Organizer of the RISM Congress "Hyperbolic PDEs: Theorems and Applications", RISM - villa Toeplitz, Varese.

Organizer of the RISM Workshop "Louis Nirenberg Legacy", RISM - villa Toeplitz, Varese.

Organizer of the RISM Workshop "If on a winter day a PDE", RISM - villa Toeplitz, Varese.

2024 **Organizer** of the second RISM Congress on "PDEs and Continuum Mechanics", RISM - villa Toeplitz, Varese.

Organizer of the International Forum "Stop violence against women's", RISM - villa Toeplitz, Varese.

Organizer of the "INdAM day 2024", RISM - villa Toeplitz, Varese.

Organizer of the permanent exhibition "Diamo i Numeri", RISM - villa Toeplitz, Varese.

2023 **Organizer** of the RISM workshop "Bridges between Mathematics and Engineering: interactions fluid-structure".

Organizer of the RISM Congress *Analysis and PDEs - on the occasion of Vicentiu Radulescu's 65th birthday*, RISM - villa Toeplitz, Varese.

Organizer of the second Riemann Prize Week.

2022 **Organizer** of the event *Le regole dell'Illusione: mnemonic, fast computation and image ambiguity, towards quantum understanding*, Theater of Varese and Estense Palace.

Organizer of the event *La matematica svela la musica dell'arte*, Fondazione Marcello Morandini - Varese.

Organizer of the fifth RISM course for national PhD schools, *by Michael Struwe*, RISM - villa Toeplitz, Varese.

Organizer of the second *China-Italy conference on Partial Differential Equations and Their Applications*, Varese.

2021 **Organizer** of the *Riemann Prize Week*, `https://riemannprize.com`

Organizer of the RISM congress *PDEs and continuum mechanics*, RISM - villa Toeplitz, Varese.

Organizer of the RISM workshop *Accidents in Process Industries*, RISM - villa Toeplitz, Varese.

2020 **Organizer** of the RISM congress *Matematica, Filosofia e pandemia: dall'incertezza al pensiero critico*, RISM - villa Toeplitz, Varese *(Streaming)*.

Organizer of the fourth RISM intensive PhD course *Maximum Principle and Detours - by Italo Capuzzo Dolcetta*, RISM - villa Toeplitz, Varese *(Streaming)*.

2019 **Organizer** of the congress *L'intreccio tra Matematica e Filosofia: occasioni o tentazioni?*, Università degli Studi dell'Insubria, Varese.

Organizer of the congress *Advances and Challenges in Nonlinear Analysis and... Beyond! - On the occasion of Vieri Benci's 70th birthday*, Univ. di Bari.

Organizer of the RISM congress *XI Brazilian–Italian workshop on Nonlinear Differential Equations*, Collegio C. Cattaneo, Varese.

Organizer of the RISM congress *Modelling the Cardiac Function - iHeart* (Director: Alfio Quarteroni), villa Toeplitz, Varese.

Organizer of the workshop *Advances and Challenges in Nonlinear Elliptic Systems*, RISM, Varese.

2018 **Organizer** of the sixth RISM school *RISM6 - Developments in stochastic Partial Differential Equations - in honour of Giuseppe Da Prato* (Director: Martin Hairer), Collegio C. Cattaneo, Varese.

Organizer of the second RISM course *Some New and Old Problems in the Calculus of Variations - by Arrigo Cellina*, RISM - villa Toeplitz, Varese.

Organizer of the RISM workshop *New Advances in PDE - in honor of Anna Maria Micheletti's birthday*, RISM.

Organizer of the workshop *Mathematical Methods in Chemical Engineering and Beyond*, RISM.

Organizer of the forthcoming third RISM course *Generalized Solutions to Differential Equations: Theory and Applications - by Vieri Benci*, RISM.

2017 **Organizer** of the workshop *RISM workshop in PDE - On the occasion of Daniela Lupo's 60th birthday*, RISM.

Organizer of the fifth RISM school *RISM5–Topological and Algebraic Advances in QFT* (Director: Ron Donagi), RISM.

Organizer of the workshop *Mathematical Methods for Digital Image Analysis and Processing*, RISM.

Organizer of the RISM course *Between discrete and continuous structures* by Umberto Mosco.

2016 **Organizer** of the workshop *Nonlinear PDE, inequalities and Applications*, RISM.

Organizer of the congress *French-Italian Meeting on Spectral Triples in Noncommutative Geometry*, RISM.

Organizer of the IISS *Recursion, Integrability, Geometry, and Mechanics*, RISM.

Organizer of the fourth RISM School on *Nonlinear Phenomena in Mathematics and Economics* (Director: Ivar Ekeland), Collegio C. Cattaneo, Varese.

2014 **Organizer** of the workshop *Optimal inequalities and PDE*, RISM.

Organizer of the congress *A meeting with Louis Nirenberg*, RISM.

Editorial Activity:

2025–Present **Editor** of *Opuscula Mathematica*, AGH University of Krakow, `https://www.opuscula.agh.edu.pl/board`.

2019–Present **Editor** of *Milan Journal of Mathematics - Springer*, `https://www.springer.com/journal/32`

2023–2025 **Editor** of *Advances in Nonlinear Analysis - De Gruyter*.

2009 **Collaborator** of *Ist. Enciclopedia Italiana fondata da G. Treccani*: author.

Collaborator of *Garzanti* publishing house: scientific supervisor.

Public engagement:

Other:

2021–Present **Member** of the *Rotary Club 1928 Varese* - District 2042 (Luvinate - VA).

Bibliometrics (since 2004)

Scopus: 43 papers, Citations 921, H-index 17.

Research interests

Nonlinear Analysis and Calculus of Variations, Partial Differential Equations and Inequalities, Systems of PDEs. Solitons Field Theory, Local and nonlocal Schrödinger operators, Best constants in functional inequalities, Maximum principle, Higher order operators, Potential Theory, Inverse problems. Applications to Micro Electro Mechanical Systems and Image processing.

Publications (sorted by oldest, **selected**, # citations by Scopus)

1. D. Cassani, *Existence and non-existence of solitary waves for the critical Klein–Gordon equation coupled with Maxwell's equations*, Nonlinear Anal. **58** (2004), 733–747. # 95

2. D. Cassani, *Remarks on a 'Serrin curve' for systems of differential inequalities*, Rend. Ist. Lombardo Cl. Sci. Mat. Nat. **140** (2006/2008), 115–126.

3. D. Cassani, J.M. do Ó and N. Ghoussoub *On a fourth order elliptic problem with a singular nonlinearity*, Adv. Nonlinear Stud. **9** (2009), 189–209. # 47

4. D. Cassani, *Lorentz-Sobolev spaces and systems of Schrödinger equations in* $\mathbb{R}^N$, Nonlinear Anal. **70** (2009), 2846–2854. # 7
5. D. Cassani and C. Tarsi, *A Moser-type inequality in Lorentz-Sobolev spaces for unbounded domains in* $\mathbb{R}^N$, Asymptotic Anal. **64** (2009), 29–51. # 27
6. D. Cassani, B. Kaltenbacher and A. Lorenzi, *Direct and inverse problems related to MEMS*, Inverse Problems **25** (2009), 105002 (22 pp). # 17
7. D. Cassani, B. Ruf and C. Tarsi, *Best constants for Moser type inequalities in Zygmund spaces*, Mat. Contemp. **36** (2009), 79–90.
8. D. Cassani, J.M. do Ó and A. Moameni, *Existence and concentration of solitary waves for a class of quasilinear Schrödinger equations*, Commun. Pure Appl. Anal. **9** (2010), 281–306. #24
9. D. Cassani, *Nonlinear elliptic systems with critical growth*, Lambert Academic Publishing (2010), PhD Thesis, 70 pp.
10. D. Cassani, B. Ruf and C. Tarsi *Best constants in a borderline case of second order Moser type inequalities*, Ann. Inst. H. Poincaré Anal. Non Linéaire **27** (2010), 73–93. #18
11. E. Berchio, D. Cassani and F. Gazzola *Hardy-Rellich inequalities with boundary remainder terms and applications*, Manuscripta Math. **131** (2010), 427–458. # 29
12. D. Cassani, L. Fattorusso and A. Tarsia, *Global existence for nonlocal MEMS*, Nonlinear Anal. **74** (2011), 5722–5726. #13
13. D. Cassani, B. Ruf and C. Tarsi, *Group invariance and Pohozaev identities in Moser type inequalities*, Comm. Contemp. Math. **15** (2013), 1250054 (20pp). # 12
14. D. Cassani, B. Ruf and C. Tarsi, *Optimal Sobolev-type inequalities in Lorentz spaces*, Potential Anal. **39** (2013), 265–285. #20
15. D. Cassani, B. Ruf and C. Tarsi, *A Moser type inequality in Zygmund spaces without boundary conditions*, Contemporary Mathematics **595** (2013), Recent Trends in Nonlinear Partial Differential Equations II: Stationary Problems, (22pp).
16. D. Cassani, L. Fattorusso and A. Tarsia, *Nonlocal dynamic problems with singular nonlinearities and applications to MEMS*, Progress in Nonlinear Differential Equations and their Applications, Birkhäuser (2014), (22 pp). # 16
17. Z.-J. Bai, D. Cassani, M. Donatelli and S. Serra Capizzano, *A Fast Alternating Minimization Algorithm for Total Variation Deblurring Without Boundary Artifacts*, J. Math. Anal. Appl. **415** (2014), 373–393. # 17
18. D. Cassani, F. Sani and C. Tarsi, *Equivalent Moser type inequalities in* $\mathbb{R}^2$ *and the zero mass case*, J. Funct. Anal. **267** (2014), 4236–4263. # 67
19. D. Cassani and C. Tarsi, *Existence of solitary waves for supercritical Schrödinger systems in dimension two*, Calc. Var. Partial Differential Equations **54** (2015), 1673–1704. # 22
20. D. Cassani and A. Tarsia, *Periodic solutions to nonlocal MEMS equations*, Discrete Contin. Dyn. Syst. Ser. S. **9** (2016), pp. 631–642. # 9

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21. C. Alves, D. Cassani, C. Tarsi and M. Yang, *Existence and concentration of ground state solutions for a critical nonlocal Schrödinger equation in* $\mathbb{R}^2$, J. Differential Equations **261** (2016), 1933–1972. # 143

22. D. Cassani, J.M. do Ó and Jianjun Zhang, *Multi-bump solutions for singularly perturbed Schrödinger equations in* $\mathbb{R}^2$ *with general nonlinearities*, Topol. Methods Nonlinear Anal. **49** (2017), 205–231. # 3

23. D. Cassani and J. Zhang, *A priori estimates and positivity for semiclassical ground states for systems of critical Schrödinger equations in dimension two*, Comm. Partial Differential Equations **42** (2017), 655–702. # 10

24. D. Cassani, B. Ruf and C. Tarsi, *Equivalent and attained version of Hardy's inequality in* $\mathbb{R}^n$, J. Funct. Anal. **275** (2018), 3303–3324. # 8

25. D. Cassani, B. Ruf and C. Tarsi, *On the capacity approach to non-attainability of Hardy's inequality in* $\mathbb{R}^n$, Discrete Contin. Dyn. Syst. Ser. S. **12** (2019), 245–250. # 1

26. D. Cassani and J. Zhang, *Choquard type equations with Hardy-Littlewood-Sobolev upper-critical growth*, Adv. Nonlinear Anal. **8** (2019), 1184–1212. # 106

27. D. Cassani, Z. Liu, C. Tarsi and J. Zhang, *Multiplicity of sign-changing solutions for Kirchhoff type equations*, Nonlinear Anal. **186** (2019), 145–161. # 25

28. D. Cassani, C. Tarsi and J. Zhang, *Bounds for best constants in subcritical Sobolev embeddings*, Nonlinear Anal. **187** (2019), 438–449. # 8

29. D. Cassani, J. Van Schaftingen and J. Zhang, *Groundstates for Choquard type equations with Hardy–Littlewood–Sobolev lower critical exponent*, Proc. Roy. Soc. Edinburgh Sect. A. **150** (2018/2020), 1377–1400. # 43

30. D. Cassani, H. Tavares and J. Zhang, *Bose fluids and positive solutions of weakly coupled systems with critical growth in dimension two*, J. Differential Equations **269** (2020), 2328–2385. # 11

31. D. Cassani and D. Schiera, *Uniqueness results for higher order Lane-Emden systems*, Nonlinear Anal. **198** (2020), 17 pp. # 6

32. D. Cassani and Y. Wang and J. Zhang, *A unifed approach to singularly perturbed quasilinear Schrödinger equations*, Milan J. Math. **88** (2020), 507–534. # 9

33. D. Cassani, L. Vilasi and Y. Wang, *Local vs nonlocal elliptic equations: short-long range field interactions*, Adv. Nonlinear Anal. **10** (2021), 895–921. # 15

34. D. Cassani, L. Vilasi and J. Zhang, *Concentration phenomena at saddle points of potential for Schrödinger-Poisson systems*, Comm. Pure Appl. Anal. **20** (2021), 1737–1754. # 4

35. D. Cassani and C. Tarsi, *Schrödinger–Newton equations in dimension two via a Pohozaev–Trudinger log-weighted inequality*, Calc. Var. Partial Differential Equations **60:197** (2021), 32 pp. # 36

36. D. Cassani and Y. Wang, *Blow-up phenomena and asymptotic profiles passing from* H^1*-critical to super-critical quasilinear Schrödinger equations*, Adv. Nonlinear Stud. **21** (2021), 855–874. # 3

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https://www.uninsubria.it/hpp/daniele.cassani – https://www.rism.it

37. D. Cassani and Y. Wang, *Asymptotic behavior of ground states and local uniqueness for fractional Schrödinger equations with nearly critical growth*, Potential Anal. (2021/2023), 40 pp. # 2

38. D. Cassani and A. Tarsia, *Maximum Principle for Higher Order Operators in General Domains*, Adv. Nonlinear Anal. **11** (2022), 655–671. # 4

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