

Giuseppe Savaré – Curriculum vitae

PERSONAL INFORMATION

Savaré, Giuseppe. ResearcherID: H-3651-2014.
Nationality: Italian. Born in Pavia, August 25, 1966. Married, four children
Webpage, complete CV and list of papers: <http://www-dimat.unipv.it/savare>

EDUCATION

1984–1988: *Laurea (cum laude) in Mathematics*, University of Pavia, Italy
Problemi di discretizzazione per equazioni differenziali astratte. Advisor: prof. Claudio Baiocchi.

CURRENT POSITION

2000–present: *Full Professor*, Mathematical Analysis
Department of Mathematics “F. Casorati”, University of Pavia, Italy

PREVIOUS POSITIONS

1990–1998: *Researcher*. Institute of Numerical Analysis, Italian National Council of Research (C.N.R.)
1998–2000: *Associate professor*. Faculty of Engineering, University of Pavia, Italy

FELLOWSHIPS AND AWARDS

1994: *Gioachino Japichino Prize*, awarded by the *Accademia Nazionale dei Lincei* to a mathematician (under 30 years of age) for a relevant publication in Analysis.
2011: *Ennio De Giorgi Prize*, first edition; awarded by the *Italian Mathematical Union* to a mathematician under 45 years of age.
2009–present: *Membro Corrispondente*, *Istituto Lombardo, Accademia di Scienze e Lettere*, Milano.
2015: *John von Neumann Visiting Professor*, Technische-Universität München.
2016: Invited Speaker at the 7th European Congress of Mathematics (7ECM), Berlin: section “Analysis and PDEs”.

SUPERVISION OF GRADUATE STUDENTS

1998: Simona Sanfelici (now Associate professor, University of Parma), *Mathematical models of electric cardiac activity*. Co-advised with Piero Colli Franzone.
2005: Riccarda Rossi (now associate professor, University of Brescia), *Existence and compactness results for evolution equations and applications to phase field models*.
2006: Stefano Lisini (now assistant professor, University of Pavia) *Absolutely continuous curves in Wasserstein spaces with applications to continuity equation and to nonlinear diffusion equations*.
2007: Marco Veneroni (now associate professor, University of Pavia), *Mathematical models for the cardiac electric field*.
2011: Luca Natile (now high school professor), *Applications of Optimal Transport to evolution problems: Sticky Particles system and Fokker Planck equations*.
2015: Giovanni Bonaschi (now Portfolio Manager at ARCA Fondi SGR, Milano) *Thee topics regarding gradient flows*. Co-advised with Mark Peletier, Eindhoven.
2016: Luca Minotti *Visco-Energetic solutions to rate-independent evolution problems*.
Current: Nicolò De Ponti

I also mention the supervision of the Diploma theses (published afterwards on international mathematical journals) of Federico Bassetti (now associate professor in Pavia), Laura Spinolo (researcher at IMATI-CNR) and Sara Daneri (assistant professor, Erlangen).

POSTDOCTORAL FELLOWS

2006-2008: Antonio Marigonda (now assistant professor, University of Verona)
2007-2008: Daniel Matthes (now full professor, Technische Universität München)
2009-2011: Edoardo Mainini (now assistant professor, University of Genova)
2015-2016: Matteo Muratori (now assistant professor, Politecnico di Milano)

2015-2016: Carlo Orrieri (now post-doc in Rome, “La Sapienza”)

2017-: Dario Mazzoleni

TEACHING ACTIVITIES

I have mainly been teaching courses of Mathematical Methods for the Engineering Faculty. Since 2014 I have been teaching the course of Analysis III for the degree in Mathematics.

Since 2000, for the PhD programme in *Mathematics and Statistics* (Pavia) I have also been teaching various courses as PDEs, Semigroup Theory, Calculus of Variations, Optimal transport.

ORGANISATION OF SCIENTIFIC MEETINGS

2016: bimester on *Nonlinear Flows*, Research Centre ESI, University of Vienna.

Co-organizers: E. Feireisl, A. Juengel, A. Mielke, U. Stefanelli.

2011 and 2014: MFO Workshop. *Variational Methods for Evolution*, Oberwolfach (DE).

Co-organizer: L. Ambrosio, A. Mielke, M. Peletier, U. Stefanelli.

2008, 2010, 2012, 2014, 2016: Workshops on *Optimal Transportation and Applications*, De Giorgi Center, Pisa (IT). Co-organizer: L. Ambrosio, G. Buttazzo.

2011: Conference *Analysis and Numerics of PDEs - In memory of Enrico Magenes*, Pavia (IT).

2010: BIRS Workshop: *Rate-independent systems: Modeling, Analysis, and Computations*, Banff (CA).

Co-organizer: U. Stefanelli.

2008: CIME Course: *Nonlinear Partial Differential Equations and Applications*, Cetraro (IT).

Co-organizer: L. Ambrosio.

INSTITUTIONAL RESPONSIBILITIES

1998–present: IMATI-CNR, research associate.

2001-2008: Director of the PhD program in *Mathematics and Statistics*. Università di Pavia.

COMMISSIONS OF TRUST

2014–present: Scientific Advisory Board, C.I.M.E. foundation, Firenze, Italy.

2014–2016: University Assessment Commission, University of Pavia.

MAJOR COLLABORATIONS

I have collaborated with 40 different co-authors. Among the main collaborations (not counting former PhD students), I recall

Luigi Ambrosio (Scuola Normale Superiore, Pisa, I): Optimal Transport, Gradient flows, analysis in metric-spaces. Together with N. Gigli, we wrote the monograph *Gradient flows in metric spaces and in spaces of probability measures*, Birkhäuser, 2005 (second edition in 2008).

Piero Colli Franzone (Pavia, I): mathematical models for electrocardiology.

Jean Dolbeault (Université Paris Dauphine, Paris, F): Transport distances, functional inequalities.

Alexander Mielke (WIAS, Berlin, D): Rate-independent problems.

Nicola Gigli (SISSA, Trieste, I): analysis in metric-measure spaces.

Robert McCann (Toronto, CA): Fourth order nonlinear diffusion equations.

Ricardo H. Nochetto (University of Maryland, USA): optimal error estimates for evolution problems.

Mark Peletier (TU Eindhoven, NL): Reaction-diffusion systems, Fokker-Planck equations.

Giuseppe Toscani (Pavia, I): nonlinear diffusion equations, entropy methods.

EDITORIAL BOARDS

2013–present: Potential Analysis.

2016–present: Applied Mathematics and Optimization

RESEARCH PROJECTS

2016–present: Principal Investigator of the Cariplo grant for the project *Variational Evolution Problems and Optimal Transport*.

Leader of the Pavia Research unit of the following Projects of National Interest (PRIN) funded by the Italian Ministry of Education (MIUR):

2007-2009: *Optimal Transport and evolution variational problems*. National leader: Luigi Ambrosio

2010-2012: *Variational, functional-analytic, and optimal transport methods for dissipative evolutions and stability problems*. National leader: Luigi Ambrosio
2013-2016: *Calculus of Variations*. National leader: Gianni Dal Maso.
2016–present: *Calculus of Variations*. National leader: Luigi Ambrosio

Selected Publications

The MSC database attributes to me 78 publications with 1974 citations by 1180 authors.

ISI Highly cited papers

Metric measure spaces with Riemannian Ricci curvature bounded from below (with L. Ambrosio, N. Gigli). *Duke Math. J.*, 163 (2014):1405–1490, cit. 70. Rank 4th among 2014 most cited papers according to MathSciNet.

Calculus and heat flow in metric measure spaces and applications to spaces with Ricci bounds from below (with L. Ambrosio, N. Gigli). *Invent. Math.* 195 (2014), 289–391, cit. 65. Rank 6th among 2014 most cited papers according to MathSciNet.

Bakry-Émery curvature-dimension condition and Riemannian Ricci curvature bounds (with L. Ambrosio, N. Gigli). *Annals of Probability*, 43, (2015): 339–404, cit. 29.

Self-improvement of the Bakry-Émery condition and Wasserstein contraction of the heat flow in $RCD(K, \infty)$ metric measure spaces. *Discrete Contin. Dyn. Syst.* 34 (2014), no. 4, 1641–1661, cit. 25.

Density of Lipschitz functions and equivalence of weak gradients in metric measure spaces (with L. Ambrosio, N. Gigli). *Rev. Mat. Iberoamer.*, 29 (2013): 969-996, cit. 38.

On the Bakry-Emery Condition, the Gradient Estimates and the Local-to-Global Property of $RCD^(K, N)$ Metric Measure Spaces* (with L. Ambrosio, A. Mondino). *Journal of Geom. Analysis*, 26 (2016): 24–56, cit. 17.

Other publications

Balanced viscosity (BV) solutions to infinite-dimensional rate-independent systems (with A. Mielke, R. Rossi). *JEMS*, 18 (2016) 2107–2165.

On the duality between p -Modulus and probability measures (with L. Ambrosio, S. Di Marino). *JEMS*, 17 (2015) 1817–1853.

From diffusion to reaction via Γ -convergence (with M. A. Peletier, M. Veneroni). *SIAM J. Math. Anal.* 42 (2010): 1805–1825. Cit. 8. [SIAM Review’s SIGEST award.]

The Wasserstein gradient flow of the Fisher information and the quantum drift-diffusion equation (with U. Gianazza, G. Toscani). *Arch. Ration. Mech. Anal.*, 194 (2009):133–220. Cit. 58.

Existence and stability for Fokker-Planck equations with log-concave reference measure (with L. Ambrosio, L. Zambotti). *Probab. Theory Related Fields*, 145 (2009):517–564. Cit. 43.

A new class of transport distances between measures (with J. Dolbeault, B. Nazaret) *Calc. Var. Partial Differential Equations*, 34 (2009):193–231. Cit. 39.

Multiscale modeling for the bioelectric activity of the heart (with M. Pennacchio, P. Colli Franzone). *SIAM J. Math. Anal.*, 37 (2005):1333–1370. Cit. 41.

A posteriori error estimates for variable time-step discretizations of nonlinear evolution equations (with R.H. Nochetto, C. Verdi). *Comm. Pure Appl. Math.*, 53 (2000):525–589. Cit. 71

Regularity results for elliptic equations in Lipschitz domains. *J. Funct. Anal.*, 152 (1998):176–201. Cit. 79.

Monographs and contributions to volumes

Gradient flows in metric spaces and in the space of probability measures (with L. Ambrosio, N. Gigli) *Lectures in Mathematics ETH Zürich*. Birkhäuser Verlag, Basel, 2005 (second edition 2008).

The two editions have received more than 647 citations, according to MSC.

Computational electrocardiology: mathematical and numerical modeling (with P. Colli Franzone, L. F. Pavarino; contribution). In *Complex systems in biomedicine*, pages 187–241. Springer Italia, Milan, 2006.

Invited presentation to conferences (selection)

- MFO workshop: *Applications of Optimal Transportation in the Natural Sciences* Oberwolfach, 2017.
- MFO workshop: *Heat Kernels, Stochastic Processes and Functional Inequalities* Oberwolfach, 2016.
- Workshop *Analysis in Lyon*, Lyon, 2015.
- Conference on *New trends in Optimal Transport*, HIM, Bonn, 2015.
- BIRS workshop: *Entropy Methods, PDEs, Functional Inequalities, and Applications*, Banff, 2014.
- International Conference on *Fractal Geometry and Stochastics V*, Tabarz (DE), 2014. Plenary speaker.
- Workshop on *Infinite-Dimensional Geometry*, MSRI, Berkeley, 2013.
- EQUADIFF 2013, Prague. Plenary speaker.
- Conference on *Probability and Geometry*, Poitiers, 2012.
- BIRS Workshop: *Optimal Transportation and Differential Geometry* Banff, 2012.
- MFO workshop: *Interplay of Analysis and Probability in Physics* Oberwolfach, 2012.
- MFO workshop: *Manifolds with Lower Curvature Bounds*, Oberwolfach, 2012.
- RISM meeting: *Multiphase and Multiphysics problems*, Verbania (IT), 2011.
- BIRS workshop: *Nonlinear Diffusions and Entropy Dissipation: From Geometry to Biology*, Banff, 2010.
- CIRM-HCM Meeting: *Stochastic Analysis, SPDEs, Particle Systems, Optimal Transport* Levico (IT), 2010.
- Workshop on *Particle systems, nonlinear diffusions, and equilibration*, HCM, Bonn, 2007.
- Workshop on *Optimal Transportation, and Applications to Geophysics and Geometry*, Edinburgh, 2007.
- Workshop on *Optimal transport: theory and application*, Centro De Giorgi, Pisa, 2006.
- *Nonlinear Diffusion Equations and related PDEs*, UAM, Madrid, 2006
- Workshop on *Modelling and analysis of phase transitions* Centro De Giorgi, Pisa, 2006.
- ICMS Workshop: *Optimal Transportation, Transport Equations and Hydrodynamics*, Edinburgh, 2005.
- *10th Conference on Free Boundary Problems*, Coimbra, June 7-12, 2005. Plenary speaker.

Invited courses to international advanced schools

- *Gradient flows and entropy methods*, HIM, Bonn, 2015: The Weighted Energy-Dissipation (WED) principle for gradient flows.
- *Analysis and Geometry on Singular Spaces*, Scuola Normale Superiore, Pisa, 2014: Metric measure spaces with Riemannian Ricci curvature bounded from below.
- *Seventh Summer School in Analysis and Applied Mathematics*, Roma, 2013: Gradient flows and rate-independent evolutions: a variational approach.
- *CNA Summer School on "New Vistas in Image Processing and PDEs"* Carnegie Mellon University, Pittsburgh, 2010: Applications of optimal transport to evolutionary PDEs.
- *School on "Optimal transport: Theory and applications"* Institut Fourier, Grenoble, 2008: Gradient flows and optimal transport.
- *EVEQ2008*, Prague, 2008: A variational approach to gradient flows and rate-independent problems.
- *School in Nonlinear Analysis and Calculus of Variations* Scuola Normale Superiore, Pisa, 2006: Gradient flows: a variational approach.

Pavia, April 2017.

List of publications

Preprints

- [1] Alexander Mielke, Riccarda Rossi, and Giuseppe Savaré. “Global existence results for viscoplasticity at finite strain”. In: *ArXiv e-prints* 1609.08832 (2016), pp. 1–48. URL: <http://arxiv.org/abs/1609.08832>.
- [2] Luca Minotti and Giuseppe Savaré. “Viscous corrections of the Time Incremental Minimization Scheme and Visco-Energetic Solutions to Rate-Independent Evolution Problems”. In: *ArXiv e-prints* 1606.03359 (2016), pp. 1–60. URL: <http://arxiv.org/abs/1606.03359>.
- [3] Matthias Liero, Alexander Mielke, and Giuseppe Savaré. “Optimal Entropy-Transport problems and a new Hellinger-Kantorovich distance between positive measures”. In: *ArXiv e-prints* 1508.07941 (2015), pp. 1–103. URL: <http://arxiv.org/abs/1509.07273>.

Accepted papers

- [4] Riccarda Rossi and Giuseppe Savaré. “From Visco-Energetic to Energetic and Balanced Viscosity solutions of rate-independent systems”. In: *ArXiv e-prints* 1702.00136 (2017), pp. 1–27.
- [5] Luigi Ambrosio, Andrea Mondino, and Giuseppe Savaré. “Nonlinear diffusion equations and curvature conditions in metric measure spaces”. In: *Memoirs of the A.M.S., in press* 1509.07273 (2015), pp. 1–108. URL: <http://arxiv.org/abs/1509.07273>.

Published papers

- [6] Luigi Ambrosio, Matthias Erbar, and Giuseppe Savaré. “Optimal transport, Cheeger energies and contractivity of dynamic transport distances in extended spaces”. In: *Nonlinear Anal.* 137 (2016), pp. 77–134. ISSN: 0362-546X. DOI: 10.1016/j.na.2015.12.006.
- [7] Luigi Ambrosio, Andrea Mondino, and Giuseppe Savaré. “On the Bakry-Émery condition, the gradient estimates and the local-to-global property of $RCD^*(K, N)$ metric measure spaces”. In: *J. Geom. Anal.* 26.1 (2016), pp. 24–56. ISSN: 1050-6926. DOI: 10.1007/s12220-014-9537-7.
- [8] Matthias Liero, Alexander Mielke, and Giuseppe Savaré. “Optimal Transport in Competition with Reaction: The Hellinger-Kantorovich Distance and Geodesic Curves”. In: *SIAM J. Math. Anal.* 48.4 (2016), pp. 2869–2911. ISSN: 0036-1410. DOI: 10.1137/15M1041420.
- [9] Alexander Mielke, Riccarda Rossi, and Giuseppe Savaré. “Balanced viscosity (BV) solutions to infinite-dimensional rate-independent systems”. In: *J. Eur. Math. Soc. (JEMS)* 18.9 (2016), pp. 2107–2165. ISSN: 1435-9855. DOI: 10.4171/JEMS/639.
- [10] Alexander Mielke, Riccarda Rossi, and Giuseppe Savaré. “Balanced-viscosity solutions for multi-rate systems”. In: *J. Phys. Conf. Ser.* 727 (2016), pp. 012010, 26. ISSN: 1742-6588. DOI: 10.1088/1742-6596/727/1/012010.
- [11] Virginia Agostiniani, Riccarda Rossi, and Giuseppe Savaré. “On the transversality conditions and their genericity”. In: *Rend. Circ. Mat. Palermo (2)* 64.1 (2015), pp. 101–116. ISSN: 0009-725X. DOI: 10.1007/s12215-014-0184-4.
- [12] Luigi Ambrosio, Nicola Gigli, and Giuseppe Savaré. “Bakry-Émery curvature-dimension condition and Riemannian Ricci curvature bounds”. In: *Ann. Probab.* 43.1 (2015), pp. 339–404. ISSN: 0091-1798. DOI: 10.1214/14-AOP907.
- [13] Luigi Ambrosio, Simone Di Marino, and Giuseppe Savaré. “On the duality between p -modulus and probability measures”. In: *J. Eur. Math. Soc. (JEMS)* 17.8 (2015), pp. 1817–1853. ISSN: 1435-9855. DOI: 10.4171/JEMS/546.

- [14] Nicola Gigli, Andrea Mondino, and Giuseppe Savaré. “Convergence of pointed non-compact metric measure spaces and stability of Ricci curvature bounds and heat flows”. In: *Proc. Lond. Math. Soc.* (3) 111.5 (2015), pp. 1071–1129. ISSN: 0024-6115. DOI: 10.1112/plms/pdv047.
- [15] Luigi Ambrosio, Nicola Gigli, and Giuseppe Savaré. “Calculus and heat flow in metric measure spaces and applications to spaces with Ricci bounds from below”. In: *Invent. Math.* 195.2 (2014), pp. 289–391. ISSN: 0020-9910. DOI: 10.1007/s00222-013-0456-1.
- [16] Luigi Ambrosio, Nicola Gigli, and Giuseppe Savaré. “Metric measure spaces with Riemannian Ricci curvature bounded from below”. In: *Duke Math. J.* 163.7 (2014), pp. 1405–1490. ISSN: 0012-7094. DOI: 10.1215/00127094-2681605.
- [17] Giuseppe Savaré. “Self-improvement of the Bakry-Émery condition and Wasserstein contraction of the heat flow in $RCD(K, \infty)$ metric measure spaces”. In: *Disc. Cont. Dyn. Syst. A* 34 (2014), pp. 1641–1661. DOI: 10.3934/dcds.2014.34.1641.
- [18] Giuseppe Savaré and Giuseppe Toscani. “The concavity of Rényi entropy power”. In: *IEEE Trans. Inform. Theory* 60.5 (2014), pp. 2687–2693. ISSN: 0018-9448. DOI: 10.1109/TIT.2014.2309341.
- [19] Luigi Ambrosio, Nicola Gigli, and Giuseppe Savaré. “Density of Lipschitz functions and equivalence of weak gradients in metric measure spaces”. In: *Rev. Mat. Iberoamericana* 29 (2013), 969–986. DOI: 10.4171/RMI/746.
- [20] Y. Brenier, W. Gangbo, G. Savaré, and M. Westdickenberg. “Sticky particle dynamics with interactions”. In: *J. Math. Pures Appl.* (9) 99.5 (2013), pp. 577–617. ISSN: 0021-7824. DOI: 10.1016/j.matpur.2012.09.013.
- [21] Alexander Mielke, Riccarda Rossi, and Giuseppe Savaré. “Nonsmooth analysis of doubly nonlinear evolution equations”. In: *Calc. Var. Partial Differential Equations* 46.1-2 (2013), pp. 253–310. ISSN: 0944-2669. DOI: 10.1007/s00526-011-0482-z.
- [22] Riccarda Rossi and Giuseppe Savaré. “A characterization of Energetic and BV solutions to one-dimensional rate-independent systems”. In: *Discrete Contin. Dyn. Syst. (S)* 6.1 (2013), pp. 167–191. DOI: 10.3934/dcdss.2013.6.167.
- [23] Steffen Arnrich, Alexander Mielke, Mark A. Peletier, Giuseppe Savaré, and Marco Veneroni. “Passing to the Limit in a Wasserstein Gradient Flow: From Diffusion to Reaction”. In: *Calc. Var. Partial Differential Equations* 44.3 (2012), pp. 419–454. DOI: 10.1007/s00526-011-0440-9.
- [24] Jean Dolbeault, Bruno Nazaret, and Giuseppe Savaré. “From Poincaré to logarithmic Sobolev inequalities: a gradient flow approach”. In: *SIAM J. Math. Anal.* 44.5 (2012), pp. 3186–3216. ISSN: 0036-1410. DOI: 10.1137/110835190.
- [25] Simona Fornaro, Stefano Lisini, Giuseppe Savaré, and Giuseppe Toscani. “Measure valued solutions of sub-linear diffusion equations with a drift term”. In: *Discrete Contin. Dyn. Syst. (A)* 32.5 (2012), pp. 1675–1707. DOI: 10.3934/dcds.2012.32.1675.
- [26] Stefano Lisini, Daniel Matthes, and Giuseppe Savaré. “Cahn-Hilliard and Thin Film equations with nonlinear mobility as gradient flows in weighted-Wasserstein metrics”. In: *J. Differential Equations* 253.2 (2012), pp. 814–850. DOI: 10.1016/j.jde.2012.04.004.
- [27] Alexander Mielke, Riccarda Rossi, and Giuseppe Savaré. “BV solutions and viscosity approximations of rate-independent systems”. In: *ESAIM: Control, Optimisation and Calculus of Variations* 8 (2012), pp. 36–80. DOI: 10.1051/cocv:2006013.
- [28] Alexander Mielke, Riccarda Rossi, and Giuseppe Savaré. “Variational convergence of gradient flows and rate-independent evolutions in metric spaces”. In: *Milan J. Math.* 80.2 (2012), pp. 381–410. ISSN: 1424-9286. DOI: 10.1007/s00032-012-0190-y.

- [29] Mark A. Peletier, Giuseppe Savaré, and Marco Veneroni. “Chemical Reactions as Γ -Limit of Diffusion”. In: *SIAM Review* 54.2 (2012), pp. 327–352. doi: 10.1137/110858781.
- [30] Luca Natile, Mark A. Peletier, and Giuseppe Savaré. “Contraction of general transportation costs along solutions to Fokker-Planck equations with monotone drifts”. In: *Journal de Mathématiques Pures et Appliqués* 95 (2011), pp. 18–35. doi: 10.1016/j.matpur.2010.07.003.
- [31] Riccarda Rossi, Giuseppe Savaré, Antonio Segatti, and Ulisse Stefanelli. “A variational principle for gradient flows in metric spaces”. In: *C. R. Math. Acad. Sci. Paris* 349.23-24 (2011), pp. 1225–1228. ISSN: 1631-073X. doi: 10.1016/j.crma.2011.11.002.
- [32] Josè A. Carrillo, Stefano Lisini, Giuseppe Savaré, and Dejan Slepcev. “Nonlinear mobility continuity equations and generalized displacement convexity”. In: *J. Funct. Anal.* 258.4 (2010), pp. 1273–1309. ISSN: 0022-1236. doi: 10.1016/j.jfa.2009.10.016.
- [33] Mark A. Peletier, Giuseppe Savaré, and Marco Veneroni. “From diffusion to reaction via Γ -convergence”. In: *SIAM J. Math. Anal.* 42.4 (2010), pp. 1805–1825. ISSN: 0036-1410. doi: 10.1137/090781474.
- [34] Luigi Ambrosio, Giuseppe Savaré, and Lorenzo Zambotti. “Existence and stability for Fokker-Planck equations with log-concave reference measure”. In: *Probab. Theory Related Fields* 145.3-4 (2009), pp. 517–564. ISSN: 0178-8051. doi: 10.1007/s00440-008-0177-3.
- [35] Jean Dolbeault, Bruno Nazaret, and Giuseppe Savaré. “A new class of transport distances between measures”. In: *Calc. Var. Partial Differential Equations* 34.2 (2009), pp. 193–231.
- [36] Ugo Gianazza, Giuseppe Savaré, and Giuseppe Toscani. “The Wasserstein gradient flow of the Fisher information and the quantum drift-diffusion equation”. In: *Arch. Ration. Mech. Anal.* 194.1 (2009), pp. 133–220. ISSN: 0003-9527. doi: 10.1007/s00205-008-0186-5.
- [37] Daniel Matthes, Robert J. McCann, and Giuseppe Savaré. “A family of nonlinear fourth order equations of gradient flow type”. In: *Comm. Partial Differential Equations* 34.10-12 (2009), pp. 1352–1397. ISSN: 0360-5302. doi: 10.1080/03605300903296256.
- [38] Alexander Mielke, Riccarda Rossi, and Giuseppe Savaré. “Modeling solutions with jumps for rate-independent systems on metric spaces”. In: *Discrete Contin. Dyn. Syst.* 25.2 (2009), pp. 585–615. ISSN: 1078-0947. doi: 10.3934/dcds.2009.25.585.
- [39] Luca Natile and Giuseppe Savaré. “A Wasserstein approach to the one-dimensional sticky particle system”. In: *SIAM J. Math. Anal.* 41.4 (2009), pp. 1340–1365.
- [40] Sara Daneri and Giuseppe Savaré. “Eulerian calculus for the displacement convexity in the Wasserstein distance”. In: *SIAM J. Math. Anal.* 40.3 (2008), pp. 1104–1122. doi: 10.1137/08071346X.
- [41] Jean Dolbeault, Bruno Nazaret, and Giuseppe Savaré. “On the Bakry-Emery criterion for linear diffusions and weighted porous media equations”. In: *Commun. Math. Sci.* 6.2 (2008), pp. 477–494.
- [42] Riccarda Rossi, Alexander Mielke, and Giuseppe Savaré. “A metric approach to a class of doubly nonlinear evolution equations and applications”. In: *Ann. Sc. Norm. Super. Pisa Cl. Sci.* (5) 7 (2008), pp. 97–169.
- [43] Giuseppe Savaré. “Gradient flows and diffusion semigroups in metric spaces under lower curvature bounds”. In: *C. R. Math. Acad. Sci. Paris* 345.3 (2007), pp. 151–154. ISSN: 1631-073X. doi: 10.1016/j.crma.2007.06.018.
- [44] Luigi Ambrosio, Stefano Lisini, and Giuseppe Savaré. “Stability of flows associated to gradient vector fields and convergence of iterated transport maps”. In: *Manuscripta Math.* 121 (2006), pp. 1–50. doi: 10.1007/s00229-006-0003-0.

- [45] Ricardo H. Nochetto and Giuseppe Savaré. “Nonlinear evolution governed by accretive operators in Banach spaces: error control and applications”. In: *Math. Models Methods Appl. Sci.* 16.3 (2006), pp. 439–477. ISSN: 0218-2025. DOI: 10.1142/S0218202506001224.
- [46] Micol Pennacchio, Giuseppe Savaré, and Piero Colli Franzone. “Multiscale modeling for the bioelectric activity of the heart”. In: *SIAM J. Math. Anal.* 37.4 (2006), 1333–1370 (electronic). ISSN: 0036-1410. DOI: 10.1137/040615249.
- [47] Riccarda Rossi and Giuseppe Savaré. “Gradient flows of non convex functionals in Hilbert spaces and applications”. In: *ESAIM Control Optim. Calc. Var.* 12.3 (2006), 564–614 (electronic). ISSN: 1292-8119.
- [48] Luigi Ambrosio, Nicola Gigli, and Giuseppe Savaré. “Gradient flows with metric and differentiable structures, and applications to the Wasserstein space”. In: *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. Lincei (9) Mat. Appl.* 15.3-4 (2004), pp. 327–343. ISSN: 1120-6330.
- [49] Riccarda Rossi and Giuseppe Savaré. “Existence and approximation results for gradient flows”. In: *Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur. Rend. Lincei (9) Mat. Appl.* 15.3-4 (2004), pp. 183–196. ISSN: 1120-6330.
- [50] Riccarda Rossi and Giuseppe Savaré. “Tightness, Integral Equicontinuity and Compactness for Evolution Problems in Banach Spaces”. In: *Ann. Sc. Norm. Sup., Pisa* 2 (2003), pp. 395–431.
- [51] Giuseppe Savaré. “Compactness properties for families of quasistationary solutions of some evolution equations”. In: *Trans. Amer. Math. Soc.* 354.9 (2002), pp. 3703–3722. ISSN: 0002-9947. DOI: 10.1090/S0002-9947-02-03035-0.
- [52] Giuseppe Savaré and Giulio Schimperna. “Domain perturbations and estimates for the solutions of second order elliptic equations”. In: *J. Math. Pures Appl. (9)* 81.11 (2002), pp. 1071–1112. ISSN: 0021-7824. DOI: 10.1016/S0021-7824(02)01256-4.
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