Curriculum Vitae

DOLBEAULT, Jean

Nationality : French. Married, three children — Born in Poitiers, on June 8th, 1966

Researcher unique identifiers

MathSciNet :	mrauthid=294764	Zentralblatt :	dolbeault.jean
Scholar :	ky2LFVsAAAAJ	Semantic Scholar :	Jean-Dolbeault/102845280
ResearchGate :	Jean_Dolbeault	Orcid :	0000-0003-4234-2298
Arxiv :	+Dolbeault_J	HAL :	46145
		Researcher Id (WoS) :	O-2328-2017

URL : https://www.ceremade.dauphine.fr/~dolbeaul/

Nationality : French. Married, three children ; born (8/6/1966) in Poitiers (France)

Training and education

• 2000 : Qualified for Full Professorship in CNU sections 25 (pure maths) and 26 (applied maths)
• 2000 : Habilitation, University of Paris IX - Dauphine
• 1991 : PhD in applied mathematics, University of Paris IX - Dauphine (PhD advisor : P.-L. Lions)
• 1985-1989 : Ecole Normale Supérieure ENS Ulm. DEA (Master 2) of Theoretical Physics, University of Paris VI (1987) and Magistère (Mathématiques, Informatique), University of Paris VI (1988)

Positions

• October 2018– : Senior researcher (Directeur de Recherches, CNRS, Mathematics), at CEREMADE. Classe exceptionnelle 1^{er} échelon : 2018-2020 ; $2^{ème}$ échelon : 2021–.
• 2003- : Senior researcher (Directeur de Recherches, CNRS), at CEREMADE : 2^{nd} class (2003-2011), 1^{st} class (2012-2018).
• 1993-2003 : Researcher (Chargé de Recherches, CNRS, Mathematics), at CEREMADE. 1^{st} class
• 1990-1993 : Researcher (Chargé de Recherches, CNRS, Mathematics - Theoretical Physics), in the Group of Theoretical Physics of the Laboratoire de Physique Quantique (URA 505, now Laboratoire de Physique Théorique Toulouse, UMR 5152), Institut de Recherche sur les Structures Atomiques et Moléculaires Complexes (IRSAMC), Université Paul Sabatier, Toulouse. 2^{nd} class

International mobility : long term visits

• 2024 : CMM and DIM, Universidad de Chile, Santiago, Chile (2 months)
• 2007 : CMM and DIM, Universidad de Chile, Santiago, Chile (2 months)
• 2004 : PIMS, University of Victoria and University of British Columbia, Canada (2,5 months)
• 2001 : CMM and DIM, Universidad de Chile, Santiago, Chile (4 months)
• 1998 : CIMS, Courant Institute, New York University, USA (3 months)

Fellowships

• Invited professor at University of Vienna and Technische Universität (Austria, 2013), University of Pavia (Italy, 2011), Pichorides distinguished Lectureship, University of Heraklion (Greece, 2009)
• 1985-1989 : Elève fonctionnaire stagiaire, Ecole Normale Supérieure (rue d'Ulm, Paris)
• 1989-1990 : BFR-MRT fellowship (PhD grant)

Curriculum Vitae (on-line) **and Publication list** (ordered by categories)
https://www.ceremade.dauphine.fr/~dolbeaul/CV

Major collaborations. Maria J. Esteban ; Michael Loss ; Manuel A. del Pino
Editor of *Colloquium Mathematicum* (2008-2013) and *Ars Inveniendi Analytica*, an open access journal.
Referee for various journals of international level.
Teaching activities. See webpage.

Supervision of graduate students, post-doctoral fellows, *etc.*

• 12 PhD students (with year of defence ; some of them have been co-supervised) : Carlos Cid (2001), Jean-Philippe Bartier (2005), Adrien Blanchet (2005), Juan Mayorga Zumbrano (2006), Roberta Bosi (2007), Juan Campos (2012), Gaspard Jankowiak (2014), Xingyu Li (December 2019), Nikita Simonov (with M. Bonforte, Universidad Autonóma de Madrid, February 2020), Lanoir Addala (with L. Tayeb, Tunis, July 2020), Giovanni Brigati (June 2023, partially co-advised with G. Savaré) ; ongoing co-advised PhD thesis : Camilo Gómez Araya (with D. Gontier), Alexandre Surin.
• 10 post-docs : Francisco Fernández, Óscar Sánchez Romero, Matteo Bonforte, Lyonell Boulton, Jesus Rosado, An Zhang (3 years), Andrés Zúñiga , Josephine Evans (2 years), Nikita Simonov (March 1st, 2020 - September 30, 2021), Esther Bou Dagher (0october 2023-).
• Coordinateur des travaux pour l'Habilitation à Diriger des Recherches : Ivan Gentil (2008), Bruno Nazaret (2010), François Bolley (2012) ; Emeric Bouin (2022) ; Amic Frouvelle (2023).

Organisation of scientific meetings

• Annual conference of the Hyke RTN network (2004)
• 27-31/5/2013 : coordinator of the 30th anniversary meeting of the SMAI (France, 413 participants)
• Organiser of 6 workshops of one week at BIRS, Banff, Canada (2006-2018) : *e.g.*, in 2018, *Entropies, the Geometry of Nonlinear Flows, and their Applications* (18w5069). Organiser of various workshops (5-50 participants ; CAPDE, UAM-Dauphine meetings, ANR projects, *etc.*)
• ICMAT-PDE workshop (Madrid) on *Stability of functional inequalities* (23-26/10/2023)

Coordination of networks and bilateral projects

• PI of the CBDif (Collective behavior & diffusion) ANR project (2009-2012)
• Team organizer of the Hyke (*Hyperbolic and Kinetic Equations : Asymptotics, Numerics, Applications*) RTN network HPRN-CT-2002-00282
• National coordinator of the Alfa project on *Partial Differential Equations in Industry and Engineering* (Short Term Mobility) network II-0143-FCD (Argentina, Brasil, Chile, Europe)
• Coordinator of the MathAmSud network on *Nonlinear Analysis and Partial Differential Equations* (NAPDE, Argentina, Brazil, Chile, France, 2009-2011)
• Coordinator of various bilateral contracts (PHC, ECOS) : Amadeus (Austria), ECOS (Chile), Picasso (Spain), Procope (Germany), Polonium (Poland)
• Coordinator (2011-2015) of the *LabEx SMP Sciences Mathématiques de Paris* (2011-2019, 16 M€), and coordinator of the French network of LabEx in mathematics (2011-2015)
• PI of the *EFI (Entropy, flows, inequalities)* ANR-17-CE40-0030 project (2018-2023)

Institutional responsibilities

• October 2011-July 2015 : Director of the Fondation Sciences Mathématiques de Paris (FSMP) and coordinator of the french network of the LabEx programs in mathematics
• March 2011-October 2011 : Vice-Président for Research of the University Paris-Dauphine and member of the committee of the *Paris Sciences et Lettres* PSL idEx project
• September 2010-October 2011 : Director of the Ceremade, UMR CNRS no. 7534
• November 2004-November 2012 : Member of the Scientific Board of Paris-Dauphine, with various responsibilities : member of the PhD committee (2004-2008), building committee (2004-2008), finance committee (2008-2012) and information system committee (2009-2012)
• Member of various hiring committees and boards of doctoral schools (Paris-Dauphine, Paris-Centre). Member of the Institute Review Committee (IRC) for the Collaborative and Thematic Resources Support in Mathematics and Statistics (CTRMS) program in Canada (2013-2014)
• Member of the Advisory Board of the Ceremade (2015-), of the executive committee of the PSL Graduate Program *Mathématiques et Applications* PGMA (2020-2021) and of the Scientific Board of Paris-Dauphine (2020-2024), head of the finance committee. Member of the Conseil de la recherche of the Université Libre de Bruxelles (2021-2024). Member of the Scientific Advisory Board of the *Centre sino-français de recherche conjointe en mathématiques* (2025-)

30 avril 2025

Publications

Preprints

[1] Jean Dolbeault, Maria J. Esteban, Rupert L. Frank, and Michael Loss. The CKN inequality for spinors : symmetry and symmetry breaking. Technical report, Ceremade, 2025.

[2] Giovanni Brigati, Jean Dolbeault and Nikita Simonov. Logarithmic Sobolev inequalities : a review on stability and instability results. Technical report, Ceremade, 2025.

[3] Jean Dolbeault. Stability results for Sobolev, logarithmic Sobolev, and related inequalities. Technical report, Ceremade, 2024.

[4] Jean Dolbeault, Maria J. Esteban, Alessio Figalli, Rupert L. Frank, and Michael Loss. A short review on improvements and stability for some interpolation inequalities. Technical report, Ceremade, 2024.

[5] Jean Dolbeault, Marta García-Huidobro and Raúl Manásevich. Monotonicity of the period and positive periodic solutions of a quasilinear equation. Technical report, Ceremade, 2023.

[6] Esther Bou Dagher and Jean Dolbeault. Interpolation inequalities on the sphere and phase transition : rigidity, symmetry and symmetry breaking. Technical report, Ceremade, 2022.

[7] Jean Dolbeault and Andres Zuniga. Symmetry breaking and weighted Euclidean logarithmic Sobolev inequalities. Technical report, Ceremade, 2022.

[8] Matteo Bonforte, Jean Dolbeault, Bruno Nazaret, Nikita Simonov. Stability in Gagliardo-Nirenberg-Sobolev inequalities : Flows, regularity and the entropy method. Technical report, Ceremade, 2021.

International journals

[1] Giovanni Brigati, Jean Dolbeault, and Nikita Simonov. Stability for the logarithmic Sobolev inequality. *Journal of Functional Analysis*, 287(8) :110562, October 2024.

[2] Giovanni Brigati, Jean Dolbeault, and Nikita Simonov. On Gaussian interpolation inequalities. *Comptes Rendus. Mathématique*, 362 :21–44, 2024.

[3] Giovanni Brigati, Jean Dolbeault, and Nikita Simonov. Logarithmic Sobolev and interpolation inequalities on the sphere : Constructive stability results. *Annales de l'Institut Henri Poincaré C, Analyse non linéaire*, 41(5) :1289–1321, 2023.

[4] Jean Dolbeault, David Gontier, Fabio Pizzichillo, and Hanne Van Den Bosch. Keller and Lieb-Thirring estimates of the eigenvalues in the gap of Dirac operators. *Rev. Mat. Iberoam.*, 40(2) :649–692, September 2023.

[5] Jean Dolbeault, Maria J. Esteban, Alessio Figalli, Rupert L. Frank, and Michael Loss. Sharp stability for Sobolev and log-Sobolev inequalities, with optimal dimensional dependence. *Cambridge Journal of Mathematics*, 13(2) :359–430, 2025.

[6] Jean Dolbeault, Maria Esteban, and Éric Séré. Distinguished self-adjoint extension and eigenvalues of operators with gaps. Application to Dirac–Coulomb operators. *Journal of Spectral Theory*, 13(2) :491–524, sep 2023.

[7] Jean Dolbeault, Maria J. Esteban, and Eric Séré. Corrigendum to : "On the eigenvalues of operators with gaps. Application to Dirac operators" [J. Funct. Anal. 174 (1) (2000) 208–226]. *Journal of Functional Analysis*, 284(1) :109651, 2023.

[8] Matteo Bonforte, Jean Dolbeault, Bruno Nazaret, and Nikita Simonov. Constructive stability results in interpolation inequalities and explicit improvements of decay rates of fast diffusion equations. *Discrete and Continuous Dynamical Systems*, 43(3&4) :1070–1089, 2023.

[9] Jean Dolbeault and An Zhang. Parabolic methods for ultraspherical interpolation inequalities. *Discrete and Continuous Dynamical Systems*, 43(3&4) :1347–1365, 2023.

[10] Jean Dolbeault. Functional inequalities : Nonlinear flows and entropy methods as a tool for obtaining sharp and constructive results. *Milan Journal of Mathematics*, 89(2) :355–386, 2021.

[11] Jean Dolbeault, Rupert L. Frank, and Louis Jeanjean. Logarithmic estimates for mean-field models in dimension two and the Schrödinger–Poisson system. *Comptes Rendus. Mathématique*, 359(10) :1279–1293, jan 2022.

[12] Kleber Carrapatoso, Jean Dolbeault, Frédéric Hérau, Stéphane Mischler, Clément Mouhot, and Christian Schmeiser. Special macroscopic modes and hypocoercivity. *Journal of the European Mathematical Society*, July 2024.

[13] Kleber Carrapatoso, Jean Dolbeault, Frédéric Hérau, Stéphane Mischler, and Clément Mouhot. Weighted Korn and Poincaré-Korn inequalities in the Euclidean space and associated operators. *Archive for Rational Mechanics and Analysis*, 243(3) :1565–1596, jan 2022.

[14] Jean Dolbeault and Gabriel Turinici. Social heterogeneity and the COVID-19 lockdown in a multigroup SEIR model. *Computational and Mathematical Biophysics*, 9 :14–21, 2021.

[15] Jean Dolbeault and Gabriel Turinici. Heterogeneous social interactions and the COVID-19 lockdown outcome in a multi-group SEIR model. *Mathematical Modelling of Natural Phenomena*, 15 :36, 2020.

[16] Juan Dávila, Manuel del Pino, Jean Dolbeault, Monica Musso, and Juncheng Wei. Existence and stability of infinite time blow-up in the Keller–Segel system. *Arch. Rational Mech. Anal.*, 248(61) :1–154, 2024.

[17] E. Bouin, J. Dolbeault, L. Lafleche, and C. Schmeiser. Hypocoercivity and sub-exponential local equilibria. *Monatshefte für Mathematik*, 194(1) :41–65, nov 2020.

[18] Emeric Bouin, Jean Dolbeault, and Laurent Lafleche. Fractional hypocoercivity. *Communications in Mathematical Physics*, 390(3) :1369–1411, jan 2022.

[19] Lanoir Addala, Jean Dolbeault, Xingyu Li, and M. Lazhar Tayeb. L^2-hypocoercivity and large time asymptotics of the linearized Vlasov-Poisson-Fokker-Planck system. *Journal of Statistical Physics*, 184(1), jun 2021.

[20] Jean Dolbeault and Xingyu Li. Generalized logarithmic Hardy-Littlewood-Sobolev inequality. *International Mathematics Research Notices*, 2021(23) :17862–17874, jan 2020.

[21] Jean Dolbeault and Maria J. Esteban. Improved interpolation inequalities and stability. *Advanced Nonlinear Studies*, 20(2) :277–291, May 2020.

[22] Denis Bonheure, Jean Dolbeault, Maria J. Esteban, Ari Laptev, and Michael Loss. Inequalities involving Aharonov-Bohm magnetic potentials in dimensions 2 and 3. *Reviews in Mathematical Physics*, 33 :2150006, 1–29, 2021.

[23] Denis Bonheure, Jean Dolbeault, Maria J. Esteban, Ari Laptev, and Michael Loss. Symmetry results in two-dimensional inequalities for Aharonov–Bohm magnetic fields. *Communications in Mathematical Physics*, 375(3) :2071–2087, Sep 2019.

[24] Jean Dolbeault, Marta García-Huidobro, and Rául Manásevich. Interpolation inequalities in $\mathrm{W}^{1,p}(\mathbb{S}^1)$ and carré du champ methods. *Discrete & Continuous Dynamical Systems - A*, 40(1) :375–394, 2020.

[25] Emeric Bouin, Jean Dolbeault, and Christian Schmeiser. Diffusion and kinetic transport with very weak confinement. *Kinetic & Related Models*, 13(2) :345–371, 2020.

[26] Emeric Bouin, Jean Dolbeault, and Christian Schmeiser. A variational proof of Nash's inequality. *Atti della Accademia Nazionale dei Lincei. Rendiconti Lincei. Matematica e Applicazioni*, 31 :211–223, April 2020.

[27] José A. Carrillo, Matías G. Delgadino, Jean Dolbeault, Rupert L. Frank, and Franca Hoffmann. Reverse Hardy–Littlewood–Sobolev inequalities. *Journal de Mathématiques Pures et Appliquées*, 132 :133–165, Dec 2019.

[28] Maxime Chupin, Jean Dolbeault, Maria J. Esteban, and Mathieu Lewin. Une cartographie de la communauté mathématique française. *La Gazette des Mathématiciens (Société Mathématique de France), vol. 156, pp. 49–61 & Matapli (Société de Mathématiques Appliquées et Industrielles), vol. 115, pp. 51–72*, 2018.

[29] Jean Dolbeault, Maria J. Esteban, Ari Laptev, and Michael Loss. Magnetic rings. *Journal of Mathematical Physics*, 59(5) :051504, 2018.

[30] Jean Dolbeault and Xingyu Li. Φ-Entropies : convexity, coercivity and hypocoercivity for Fokker-Planck and kinetic Fokker-Planck equations. *Mathematical Models and Methods in Applied Sciences*, 28(13) :2637–2666, 2018.

[31] Emeric Bouin, Jean Dolbeault, Stéphane Mischler, Clément Mouhot, and Christian Schmeiser. Hypocoercivity without confinement. *Pure and Applied Analysis*, 2(2) :203–232, May 2020.

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[33] Jean Dolbeault and An Zhang. Flows and functional inequalities for fractional operators. *Applicable Analysis*, 96(9) :1547–1560, 2017.

[34] Jean Dolbeault, Maria J. Esteban, and Michael Loss. Interpolation inequalities, nonlinear flows, boundary terms, optimality and linearization. *Journal of elliptic and parabolic equations*, 2 :267–295, 2016.

[35] Jean Dolbeault and An Zhang. Optimal functional inequalities for fractional operators on the sphere and applications. *Advanced Nonlinear Studies*, 16(4) :863–880, 2016.

[36] Jean Dolbeault, Maria J. Esteban, Michael Loss, and Matteo Muratori. Symmetry for extremal functions in subcritical Caffarelli–Kohn–Nirenberg inequalities. *Comptes Rendus Mathématique*, 355(2) :133 – 154, 2017.

[37] Matteo Bonforte, Jean Dolbeault, Matteo Muratori, and Bruno Nazaret. Weighted fast diffusion equations (Part I) : Sharp asymptotic rates without symmetry and symmetry breaking in Caffarelli-Kohn-Nirenberg inequalities. *Kinetic and Related Models*, 10(1) :33–59, 2017.

[38] Matteo Bonforte, Jean Dolbeault, Matteo Muratori, and Bruno Nazaret. Weighted fast diffusion equations (Part II) : Sharp asymptotic rates of convergence in relative error by entropy methods. *Kinetic and Related Models*, 10(1) :61–91, 2017.

[39] Jean Dolbeault, Matteo Muratori, and Bruno Nazaret. Weighted interpolation inequalities : a perturbation approach. *Mathematische Annalen*, pages 1–34, 2016.

[40] Jean Dolbeault, Maria J. Esteban, and Michael Loss. Interpolation inequalities on the sphere : linear vs. nonlinear flows (inégalités d'interpolation sur la sphère : flots non-linéaires vs. flots linéaires). *Annales de la faculté des sciences de Toulouse Sér. 6*, 26(2) :351–379, 2017.

[41] Jean Dolbeault, Maria J. Esteban, and Michael Loss. Rigidity versus symmetry breaking via nonlinear flows on cylinders and Euclidean spaces. *Invent. Math.*, 206(2) :397–440, 2016.

[42] Jean Dolbeault and Giuseppe Toscani. Nonlinear diffusions : Extremal properties of Barenblatt profiles, best matching and delays. *Nonlinear Analysis : Theory, Methods & Applications*, 138 :31–43, 6 2016.

[43] Jean Dolbeault and Michał Kowalczyk. Uniqueness and rigidity in nonlinear elliptic equations, interpolation inequalities, and spectral estimates. *Annales de la faculté des sciences de Toulouse Mathématiques*, 26(4) :949–977, 2017.

[44] Jean Dolbeault, Maria J. Esteban, Stathis Filippas, and Achilles Tertikas. Rigidity results with applications to best constants and symmetry of Caffarelli-Kohn-Nirenberg and logarithmic Hardy inequalities. *Calculus of Variations and Partial Differential Equations*, 54(3) :2465–2481, Nov 2015.

[45] Jean Dolbeault and Giuseppe Toscani. Stability results for logarithmic Sobolev and Gagliardo-Nirenberg inequalities. *Int. Math. Res. Not. IMRN*, 2016(2) :473–498, 2016.

[46] Jean Dolbeault and Giuseppe Toscani. Best matching Barenblatt profiles are delayed. *Journal of Physics A : Mathematical and Theoretical*, 48(6) :065206, 2015.

[47] Carmen Cortázar, Jean Dolbeault, Marta García-Huidobro, and Rául Manásevich. Existence of sign changing solutions for an equation with a weighted p-Laplace operator. *Nonlinear Analysis : Theory, Methods & Applications*, 110 :1–22, 2014.

[48] Jean Dolbeault, Maria J. Esteban, and Gaspard Jankowiak. Onofri inequalities and rigidity results. *Discrete and Continuous Dynamical Systems*, 37(6) :3059–3078, 2017.

[49] Jean Dolbeault, Maria J. Esteban, and Gaspard Jankowiak. The Moser-Trudinger-Onofri inequality. *Chinese Annals of Math. B*, 36(5) :777–802, 2015.

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[51] Jean Dolbeault, Maria J. Esteban, Michal Kowalczyk, and Michael Loss. Improved interpolation inequalities on the sphere. *Discrete and Continuous Dynamical Systems Series S (DCDS-S)*, 7(4) :695–724, August 2014.

[52] Jean Dolbeault and Robert Stańczy. Bifurcation diagrams and multiplicity for nonlocal elliptic equations modeling gravitating systems based on Fermi-Dirac statistics. *Discrete and Continuous Dynamical Systems - Series A (DCDS-A)*, 35(1) :139–154, 2015.

[53] Jean Dolbeault, Maria J. Esteban, Ari Laptev, and Michael Loss. One-dimensional Gagliardo–Nirenberg–Sobolev inequalities : remarks on duality and flows. *Journal of the London Mathematical Society*, 90(2) :525–550, 2014.

[54] I. Catto, J. Dolbeault, O. Sánchez, and J. Soler. Existence of steady states for the Maxwell-Schrödinger-Poisson system : exploring the applicability of the concentration-compactness principle. *Math. Models Methods Appl. Sci.*, 23(10) :1915–1938, 2013.

[55] Jean Dolbeault, Gaspard Jankowiak, and Peter Markowich. Stationary solutions of Keller-Segel-type crowd motion and herding models : multiplicity and dynamical stability. *Mathematics and Mechanics of Complex Systems*, 3(3) :211–241, 2015.

[56] Jean Dolbeault and Maria J. Esteban. Branches of non-symmetric critical points and symmetry breaking in nonlinear elliptic partial differential equations. *Nonlinearity*, 27(3) :435, 2014.

[57] Jean Dolbeault, Maria J. Esteban, and Michael Loss. Nonlinear flows and rigidity results on compact manifolds. *Journal of Functional Analysis*, 267(5) :1338 – 1363, 2014.

[58] Jean Dolbeault, Maria J. Esteban, and Ari Laptev. Spectral estimates on the sphere. *Analysis & PDE*, 7(2) :435–460, 2014.

[59] Jean Dolbeault, Maria J. Esteban, Michal Kowalczyk, and Michael Loss. Sharp interpolation inequalities on the sphere : New methods and consequences. *Chinese Annals of Mathematics, Series B*, 34(1) :99–112, 2013.

[60] Jean Dolbeault, Marta García-Huidobro, and Raul Manasevich. Qualitative properties and existence of sign changing solutions with compact support for an equation with a p-Laplace operator. *Advanced Nonlinear Studies*, 13 :149–178, 2013.

[61] Juan F. Campos and Jean Dolbeault. Asymptotic Estimates for the Parabolic-Elliptic Keller-Segel Model in the Plane. *Comm. Partial Differential Equations*, 39(5) :806–841, 2014.

[62] Jean Dolbeault and Maria J. Esteban. A scenario for symmetry breaking in Caffarelli-Kohn-Nirenberg inequalities. *Journal of Numerical Mathematics*, 20(3-4) :233—249, March 2013.

[63] Jean Dolbeault, Axel Klar, Clément Mouhot, and Christian Schmeiser. Exponential rate of convergence to equilibrium for a model describing fiber lay-down processes. *Applied Mathematics Research eXpress*, 2012.

[64] Manuel del Pino and Jean Dolbeault. The Euclidean Onofri inequality in higher dimensions. *International Mathematics Research Notices*, 2013(15) :3600–3611, 2012.

[65] Jean Dolbeault and Bruno Volzone. Improved Poincaré inequalities. *Nonlinear Analysis : Theory, Methods & Applications*, 75(16) :5985 – 6001, 2012.

[66] Jean Dolbeault and Giuseppe Toscani. Improved interpolation inequalities, relative entropy and fast diffusion equations. *Annales de l'Institut Henri Poincaré (C) Non Linear Analysis*, 30(5) :917 – 934, 2013.

[67] Jean Dolbeault, Maria J. Esteban, and Michael Loss. Symmetry of extremals of functional inequalities via spectral estimates for linear operators. *J. Math. Phys.*, 53(P) :095204, 2012.

[68] J. Dolbeault, B. Nazaret, and G. Savaré. From Poincaré to logarithmic Sobolev inequalities : A gradient flow approach. *SIAM Journal on Mathematical Analysis*, 44(5) :3186–3216, 2012.

[69] Jean Dolbeault. Sobolev and Hardy-Littlewood-Sobolev inequalities : duality and fast diffusion. *Math. Res. Lett.*, 18(06) :1037–1050, 2011.

[70] Jean Dolbeault, Maria Esteban, Gabriella Tarantello, and Achilles Tertikas. Radial symmetry and symmetry breaking for some interpolation inequalities. *Calculus of Variations and Partial Differential Equations*, 42 :461–485, 2011.

[71] Gonca Aki, Jean Dolbeault, and Christof Sparber. Thermal effects in gravitational Hartree systems. *Annales Henri Poincaré*, 12 :1055–1079, 2011.

[72] Jean Dolbeault and Maria J. Esteban. Extremal functions for Caffarelli-Kohn-Nirenberg and logarithmic Hardy inequalities. *Proceedings of the Royal Society of Edinburgh, Section : A Mathematics*, 142(04) :745–767, 2012.

[73] Jean Dolbeault and Giuseppe Toscani. Fast diffusion equations : matching large time asymptotics by relative entropy methods. *Kinetic and Related Models*, 4(3) :701–716, 2011.

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[81] Jean Dolbeault and Robert Stańczy. Non-existence and uniqueness results for supercritical semilinear elliptic equations. *Annales Henri Poincaré*, 10(7) :1311–1333, 02 2010.

[82] Adrien Blanchet, Jean Dolbeault, Miguel Escobedo, and Javier Fernández. Asymptotic behaviour for small mass in the two-dimensional parabolic-elliptic Keller-Segel model. *J. Math. Anal. Appl.*, 361(2) :533–542, 2010.

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[85] Adrien Blanchet, Jean Dolbeault, and MichaL Kowalczyk. Stochastic Stokes' drift, homogenized functional inequalities, and large time behavior of brownian ratchets. *SIAM Journal on Mathematical Analysis*, 41(1) :46–76, 2009.

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[87] Jean Dolbeault, Bruno Nazaret, and Giuseppe Savaré. A new class of transport distances between measures. *Calc. Var. Partial Differential Equations*, 34(2) :193–231, 2009.

[88] Jean Dolbeault, Patricio Felmer, and Mathieu Lewin. Orbitally stable states in generalized Hartree-Fock theory. *Mathematical Models and Methods in Applied Sciences*, 19(3) :347–367, 2009.

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