CURRICULUM VITAE

Panagiotis E. Souganidis

Charles H. Swift Distinguished Service Professor in Mathematics and the College
Department of Mathematics
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EDUCATION

Ph.D. University of Wisconsin-Madison, 1983
M.A. University of Wisconsin-Madison, 1981
B.A. National Kapodistrian University of Athens (EKPA), Greece, 1981

AREA OF SPECIALIZATION:

Partial Differential Equations, Stochastic Analysis

EMPLOYMENT

Academic Positions

The University of Chicago, Charles H. Swift Distinguished Service Professor, 2008 –
The University of Texas at Austin, R. L. Moore Chair, 2005 – 2008
The University of Texas at Austin, Penzoil Company Regents Professor 2002 – 2005
The University of Texas at Austin, Ashbel Smith Professor 2001 – 2002
The University of Texas at Austin, Professor, 1999 – 2008
University of Wisconsin-Madison, Professor, 1991 – 2001
Brown University, Professor, 1991–1993
Brown University, Associate Professor, 1987 – 1991
Brown University, Assistant Professor, 1983 – 1987
University of Wisconsin-Madison, Teaching/Research Assistant, 1979 – 1983

Visiting Positions

College de France, Visiting Professor, June 2009 and May 2026
University of Paris-Dauphine, Visiting Professor, June 2019, June 2018, June 2017, June 2015, June 2014, June 2013, June 2012, June 2011, July 2007, July 2004, July 2002, July 2001, June 1999, June 1997, June 1996, June 1995, June 1994, May 1993, May 1992, May 1989
MSRI, Member program on "New Challenges in PDE: Deterministic Dynamics and Randomness in High and Infinite Dimensional Systems," Fall 2015
Mittag-Leffler Institute, Stockholm, September 2014, September 1997
University of Paris-VI, Visiting Professor, June 2013
Isaac Newton Institute for Mathematical Sciences, Visiting Fellow, Spring 2007
De Giorgi Center, Pisa, Resident Scholar, March-July 2006
University of Tours, Visiting Professor, June 2003, May 2001, June 1998, June 1993
University of Crete, Greece, Visiting Professor, July-August 1996
Chuo University, Tokyo, Visiting Professor, April 1992

The Institute for Advanced Study, Member, 1990 - 1991
University of Rome (I) and Padova, Visiting Professor, May 1991
The Institute for Advanced Study, Visitor, January - May 1989
University of Minnesota-Minneapolis, Postdoctoral Fellow, 1984 - 1985

HONORS, AWARDS

ICIAM Plenary Lecturer (2019)
Fellow of American Association for the Advancement of Science (AAAS) (2017–present)
Honorary Degree in Mathematics, National Kapodistrian University of Athens (2017)
Member of the European Academy of Sciences (2017–present)
SIAM Fellow (2015–present)
Fellow of the American Mathematical Society (2012 – present)
Highly Cited Researcher (2003)
College de France, Visiting Professor (2009)
Charles H. Swift Distinguished Service Professor in Mathematics and the College, The University of Chicago (2008–to present)
R. L. Moore Chair, The University of Texas at Austin (2005-2008)
Penzoil Company Regents Professor, The University of Texas at Austin (2003-2005)
Asbel Smith Professor, The University of Texas at Austin (2001-2003)
Bodossaki Foundation Academic Prize (1996)
Villas Associate, University of Wisconsin-Madison (1996-1997)
International Congress of Mathematicians (45 minute invited lecture) (1994)
Alfred P. Sloan Fellow (1989)
Presidential Young Investigator (1987)

MEMBERSHIPS

American Mathematical Society, SIAM, AAAS

RESEARCH GRANTS

National Science Foundation, Office of Naval Research, Air Force Office Scientific Research

EDITORIAL WORK

Editor

Communications in Partial Differential Equations, 1992 – 2025.

Associate Editor

Electronic Journal on Differential Equations, 1993 – 2025.
Anal. Institute H. Poincaré Analyse Non Linéaire, 2001 – present.
Encyclopedia of Applied Mathematics and Computations, 2008 – present.
Journal of Nonlinear Differential Equations and Applications, 2008 – present.
Journal de Mathematiques, Pures et Appliques, 2009 – present.
Stochastic Partial Differential Equations:Analysis and Computation, 2011 – present.
Mathematical Models and Methods in Applied Sciences, 2013 – present.
Research in Mathematical Sciences, 2014 – present.
Advanced Nonlinear Analysis, 2022 – 2025
ESAIM: Control, Optimisation and Calculus of Variations, 2008 – 2012.
Bulletin of American Mathematical Society, 2001 – 2010.

Editorial Boards

Springer Monographs in Mathematics, 2015–to present.

SERVICE TO THE PROFESSION

Scientific Advisor of the Institute for Mathematical and Statistical Innovation (IMSI), 2020-
Member of the organizing committee of the IMSI workshop on "Methods for Solving and Analyzing Dynamic Models in the Face of Uncertainty and Cross-Sectional Heterogeneity", Winter 2024.
Member of the organizing committee of the IMSI workshop on "Mathematical Advances in Mean Field Games", Fall 2021.
Member of the organizing committee of the IMSI program on "Distributed Solutions to Complex Societal Problems", Fall 2021.
Member of the organizing committee of the IPAM program on "High Dimensional Hamilton-Jacobi PDE", Spring 2020.
Co-organizer of the workshop on "Stochastic Analysis Related to Hamilton-Jacobi PDEs," IPAM, May 2020.
Member of the advisory committee to select the new Dean of PSD, University of Chicago.
Member of external review committee for the School of Mathematics, Georgia Tech.
Organizer of a session in conference "Dynamics, Equations and Applications", Kraków, Poland.
Co-organizer of the London Math Society Durham Symposium on "Homogenization in Discord Media", Durham, UK.
Member of Scientific Committee for the International Conference "Modern Mathematical Methods in Science and Technology 2018" (M3ST'18)
Scientific Committee of Satellite of the ICM 2018 Conference on "Harmonic Analysis and Partial Differential Equations", Universidade Federal de Sao Carlos, Brazil.
Co-organizer of the Workshop/Summer School at GSSI, September, 2017, L'Aquila, Italy.
Co-organizer of the "Third Chicago Summer School in Analysis", 2017, University of Chicago.
Co-organizer of the "Second Chicago Summer School in Analysis", 2016, University of Chicago.
Co-organizer of the "First Chicago Summer School in Analysis", 2015, University of Chicago.
Chair of the committee to select the new director of the IMA.
Board of Governors, IMA, 2010–2015
Council of the AMS, Member at Large, 2009–2012
Co-organizer of Oberwolfach Seminar on "Stochastic Homogenization", September 2015, Oberwolfach, Germany
Co-organizer of workshop on "Developments in the Theory of Homogenization,", June 2015, Banff, Canada
Co-organizer of special semester on "Homogenization and Random Phenomena", Fall 2014, Mittag-Leffler Institute, Stockholm, Sweden
Co-organizer of the Inaugural Analysis School, June 2014, Chicago
Co-organizer of summer school on "Stochastic homogenization", June 2012, Chicago
Member of the review committee of the Department of Mathematics of UBC, 2012
Member of the organizing committee for the tutorial program on "viscosity solutions and mathematical biology", September 2011, Hokaido, Japan
Member of the Organizing Committee of the workshop on "Stochastic Partial Differential Equations: Theory, numerics and applications", Isaac Newton, Institute, Cambridge, UK.
Member of the Scientific Advisory Board, Banff International Research Station
Member of the Organizing Committee of the special program on "Stochastic Partial Differential Equations", January - June 2010, Isaac Newton Institute, Cambridge, UK
Member of the organizing committee for the tutorial program on "viscosity solutions and related topics", July 2010, Hokaido, Japan
Member of the Scientific Committee of the Summer 2009 PIMS Thematic program on Nonlinear PDE
Co-organizer of the workshop on "Analysis of nonlinear PDEs and free boundary problems: Applications to homogenization", July 2009 Thematic Programme on Nonlinear PDE, PIMS, Vancouver, Canada

Co-organizer of the conference "Future directions in the theory of nonlinear pde", December 2008, Austin, TX
Co-organizer of the conference "Current Perspectives in Applied Mathematics", Courant Institute, May 2009, New York
Member of the Scientific Committee of the International Conference "Contemporary Applied Mathematics", January 2009, Shanghai, China
Co-organizer of workshop on "Numerical methods for degenerate elliptic equations", PIMS, Banff, December 2006
Co-organizer of conference on "Random homogenization", CIRM, Marseille, France, July 2005
Co-organizer of a workshop on "Recent developments in random homogenization", INDAM, Rome, Italy, May 2005
Co-organizer of a workshop on "Front propagation and nonlinear stochastic pde's for combustion applications", Montreal, January 2005
Member of the Organizing Committee of the 2004-2005 thematic year on "The mathematics of stochastic multiscale modelling", CRM, Montreal
Member of the Scientific Committee of the European Training Network on "Hyperbolic and kinetic equations"
Member of the Scientific Committee of the 2001 summer program on "Nonlinear PDE" PIMS, Vancouver, Canada
Coorganizer of special program on "Viscosity methods in PDE", PIMS, Vancouver, July 2001
Co-organizer of the conference on "Nonlinear analysis", University of California-Santa Barbara, November 2000
Co-organizer of the special program on "Geometrically based motions", IPAM, Spring 2001
Co-organizer of workshop on "Moving interfaces and threshold dynamics", IPAM, May 2001
Co-organizer of conference on "Turbulent reaction diffusion", Herakleion, Greece, March 1999
Co-organizer of a Euroconference on "Front propagation", Herakleion, Greece, July 1988
Co-organizer of the summer program on "Conservation laws", Herakleion, Greece, June 1998
Co-organizer of the summer program on "Viscosity solutions", Herakleion, Greece, July 1998
Organizer of a special session at the SIAM meeting on Control, Minneapolis, September 1992
Co-organizer of a special session at the 25th IEEE-CDC, Athens, Greece
Co-organizer of a meeting on "Stochastic control and PDE" Brown University
Co-organizer of a special session at the 29th IEEE-CDC, Hawaii
Co-organizer of a special session at the AMS meeting, Philadelphia, PA
Refereeing papers and proposals
Member of NSF Review Panels

DOCTORAL COMMITTEES

O. Ley, University of Tours, France
E. Texeiro, University of Texas at Austin
M. Tores, University of Texas at Austin
L. Silvestre, University of Texas at Austin
J. Nolen, University of Texas at Austin
D. Moreira, University of Texas at Austin
C. Imbert, University of Paris 9
A. Young, University of Texas at Austin
R. Alonso, University of Texas at Austin
C. Michoski, University of Texas at Austin
B. Orkan, University of Texas at Austin
N. Guillen, University of Texas at Austin
A. Ciomaga, Ecole Normale de Cachan, France
S. Mirahimi, University of Paris 6
N. Forcadel, University of Paris 9

B. D. Froese, Simon Fraser University
G. Sakellaris, University of Chicago
C. Tiang, Sorbonne University
C. Bertucci, Ecole Polytechnique

GRADUATE STUDENTS (and current position and affiliation)

G. Kossioris, Professor, University of Crete, Greece
M. Katsoulakis, Professor, University of Massachusetts, Amherst
G. Pires, Assistant Professor, Instituto Superior Technico, Lisbon, Portugal
I. C. Kim, Professor, UCLA
D. Slepcev, Professor, Carnegie Mellon University
J. M. Fokam, Assistant Professor, American University of Nigeria
F. Carreon, Adjunct Lecturer, University of Michigan
R. Schwab, Professor, Michigan State University
Y. Zhang, Research Analyst, Deutsche Bank
J. Lin, Professor, Mcgill University, Montreal, Canada
B. Fehrman, Assistant Professor, LSU
O. Turanova, Assistant Professor, Michigan State University
B. Seeger, Assistant Professor, UNC
M. Sardarli, Radix Trading, Chicago
P. Morfe, NSF Postoctoral Fellow, MPI Leipzig
S. Munoz, Assistant Professor, UCLA
N. Mimikos-Stamatopoulos, FalconX, New York
A. Zitridis, Assistant Professor, University of Michigan
S. Li, current
D. Eccles, current

POSTDOCTORAL ADVISOR–MENTOR (and current position and affiliation)

P. Soravia, Professor, University of Padova, Italy
A. Yip, Professor, Purdue University
A. Oberman, Professor, Mcgill University, Quebec, Canada
N. Dirr, Professor, University of Cardiff, UK
M. Rudd, Associate Professor, The University of the South, Sewanee
Y. Yu, Professor, UC-Irvine
S. Armstrong, Professor, Courant Institute, New York University
A. Ciomaga, Maitre de Conference, University of Paris-7, France
H. Tran, Associate Professor, University of Wisconsin-Madison
B. Gess, Professor, MPI and Technical University of Berlin, Germany
W. Jia, Associate Professor, Yau Mathematical Sciences Center, Tsinghua University, China
W. Feldman, Assistant Professor, University of Utah
A. Tarfulea, Assistant Professor, LSU
C. Henderson, Professor, University of Maryland
B. Shabani, Assistant Instructional Professor, U Chicago
C. Mihaila, Assistant Professor, St. Michaels College
J. Cerenziam, Lecturer, ORFE, Princeton
E. Cartee, Instructional Assistant Professor at Texas AM University
J. Jackson, Dickson Instructor, U Chicago
C. Collins, Dickson Instructor, U Chicago
S. Guo, Dickson Instructor, U Chicago

PUBLICATIONS

1. Differential games and representation formulas for solutions of Hamilton-Jacobi-Isaacs equations (with L.C. Evans), Indiana U. Math. J. **33** (1984), no. 5, 773-797.
2. Developments in the theory of nonlinear first-order partial differential equations (with M.G. Crandall), *Differential Equations, Birmingham, Alabama, 1983*, 131-142, North-Holland Math. Studies, 92, North-Holland, Amsterdam, 1984.
3. A PDE approach to some large deviations problems (with W. H. Fleming). *Nonlinear systems of partial differential equations in applied mathematics, Part 1 (Santa Fe, N.M., 1984)*, 441–447, Lectures in Appl. Math. **23**, Amer. Math. Soc., Providence, RI, 1986.
4. Existence of viscosity solutions of Hamilton-Jacobi equations, J. Differential Equations **56** (1985), no. 3, 345-390.
5. Approximation schemes for viscosity solutions of Hamilton-Jacobi equations, J. Differential Equations **59** (1985), no. 1, 1-43.
6. Max-min representations and product formulas for viscosity solutions of Hamilton-Jacobi equations with applications to differential games, Nonlinear Anal. **9** (1985), no. 3, 217-257.
7. Asymptotic series for solutions to the dynamic programming equation for diffusions with small noise (with W.H. Fleming), in *Proceeding of 24th IEEE Conference on Decision and Control*, December 1985.
8. Convergence of difference approximations of quasilinear evolution equations (with M.G. Crandall), Nonlinear Anal. **10** (1986), no. 5, 425-446.
9. A PDE approach to asymptotic estimates for optimal exit probabilities (with W. H. Fleming). *Stochastic differential systems (Marseille-Luminy, 1984)*, 281–285, Lecture Notes in Control and Inform. Sci., 69, Springer, Berlin, 1985.
10. Differential games, optimal control and directional derivatives of viscosity solutions of Bellman's and Isaacs' equations (with P.-L. Lions), SIAM J. Control Optim. **23** (1985), no. 4, 566-583.
11. PDE-viscosity solution approach to some problems of large deviations (with W.H. Fleming), Ann. di Scuola Norm. Sup. Pisa Cl. Sci. (4) **13** (1986), no. 2, 171-192.
12. Differential games, optimal control and directional derivatives of viscosity solutions of Bellman's and Isaacs' equations, II (with P.-L. Lions), SIAM J. Control Optim. **24** (1986), no. 5, 1086-1089.
13. A remark about viscosity solutions on the boundary, Proc. Amer. Math. Soc. **96** (1986), no. 2, 323-330.
14. Recent developments in the theory of nonlinear scalar first and second order partial differential equations. *Dynamics of Infinite Dimensional Systems (Lisbon, 1986)*, 301-311, NATO Adv. Sci. Inst. Ser. F Comput. Systems Sci., 37, Springer, Berlin, 1987.
15. A regularity result for viscosity solutions of Hamilton-Jacobi equations in one space dimension (with R. Jensen), Trans. Amer. Math. Soc. **301** (1987), no. 1, 137-147.
16. Blow-up of solutions of Hamilton-Jacobi equations (with A. Friedman), Comm. Partial Differential Equations **11** (1986), no. 4, 397- 443.
17. Asymptotic series on the method of vanishing viscosity (with W.H. Fleming), Indiana Univ. Math. J. **35** (1986), no. 2, 425-448; Erratum: Indiana Univ. Math. J. **35** (1986), no. 4, 925.
18. Stability and instability of solitary waves of Korteweg-deVries type (with J.L. Bona and W.A. Strauss), Proc. Roy. Soc. Lond. Ser. A **411** (1987), no. 1841, 395-412.

19. The relation between the porous-medium and eikonal equations in several space dimensions (with P.- L. Lions and J.L. Vazquez), Rev. Mat. Iberoamericana **3** (1987), no. 3-4, 275-310.
20. Viscosity solutions of second-order equations, stochastic control and stochastic differential games (with P.-L. Lions). *Stochastic differential systems, stochastic control theory and applications (Minneapolis, Minn., 1986)*, 293-309, IMA Vol. Math. Appl.,10, Springer, New York, 1988.
21. A uniqueness result for viscosity solutions of second order fully nonlinear partial differential equations (with R. Jensen and P.-L. Lions). Proc. Amer. Math. Soc. **102**, (1988), no. 4, 975-978.
22. Two player, zero-sum stochastic differential games (with W.H. Fleming). *Analyse mathematique et applications*, 151–164, Gauthier-Villars, Montrouge, 1988.
23. Maximal solutions and universal bounds for some partial differential equations of evolution (with M.G. Crandall and P.-L. Lions). Arch. Rational Mech. Anal. **105** (1989), no. 2, 163-190.
24. On the existence of value functions of two player, zero-sum stochastic differential games (with W. H. Fleming). Indiana Univ. Math. J. **38** (1989), no. 2, 293-314.
25. A PDE approach to geometric optics for certain reaction-diffusion equations (with L. C. Evans), Indiana Univ. Math. J. **38** (1989), no. 1, 141-172.
26. A PDE approach to certain large deviations problem for systems of parabolic equations (with L.C. Evans). Analyse non lineaire (Perpignan, 1987). Ann. Inst. H. Poincaré Anal. Non Lineaire **6** (1989), suppl., 229–258.
27. On nonlinear evolution equations (with M. G. Crandall). Nonlinear Anal. **13** (1989), no. 12, 1375-1392.
28. Wavefront propagation for reaction-diffusion systems of PDE (with G. Barles and L. C. Evans). Duke Math. J. **61** (1990), no. 3, 835-858.
29. Instability of a class of dispersive solitary waves (with W. A. Strauss). Proc. Roy. Soc. Edinburgh Sect. A **114** (1990), nop. 3-4, 195-212.
30. Convergence of approximation schemes for fully nonlinear second order equations (with G. Barles). Asymptotic Anal. **4** (1991), no. 3, 271-283.
31. Convergence of MUSCL type methods for scalar conservation laws (with P.-L. Lions). C.R. Acad. Sci. Paris Série I Math. **311** (1990), no. 5, 259-264.
32. Front propagation for reaction-diffusion equations of bistable type (with L. Bronsard and G. Barles). Ann. Inst. H. Poincaré Anal. Non Lineaire **9** (1992), no. 5, 479-496.
33. Phase transitions and generalized motion by mean curvature (with L. C. Evans and H. M. Soner). Comm. Pure Appl. Math. **45** (1992), no. 9, 1097-1123.
34. Singularities and uniqueness of cylindrically symmetric surfaces moving by mean curvature (with H. M. Soner). Comm. Partial Differential Equations **18** (1993), no. 5-6, 859-894.
35. Front propagation and phase field theory (with G. Barles and H. M. Soner). SIAM J. Control Optim. **31** (1993), no. 2, 439-469.
36. Fully nonlinear second-order degenerate elliptic equations with large zeroth-order term (with P.-L. Lions). Indiana Univ. Math. J. **42** (1993), no. 4, 1525–1543.
37. Interacting particle systems and generalized evolution of fronts (with M. Katsoulakis). Arch. Rational Mech. Anal. **127** (1994), no. 2, 133-157.
38. Large-scale front dynamics for turbulent reaction-diffusion equations with separated velocity scales (with A. Majda). Nonlinearity **7** (1994), no. 1, 1–30.

39. A remark on the asymptotic behavior of the solution of the KPP equation (with G. Barles). C.R. Acad. Sci. Paris, Sér. I Math. **319** (1994), no. 7, 679–684.
40. Anisotropic motion of an interface relaxed by the formation of infinitesimal wrinkles (with M. Gurtin and H. M. Soner). J. Differential Equations **119** (1995), no. 1, 54–108.
41. Convergence of MUSCL and filtered schemes for scalar conservation laws and Hamilton-Jacobi (with P.-L. Lions). Numer. Math. **69** (1995), no. 4, 441-470.
42. Generalized motion of noncompact hypersurfaces with velocity having arbitrary growth on the curvature tensors (with H. Ishii). Tohuko Math. J. (2) **47** (1995), no. 2, 227–250.
43. Phase field theory for a FitzHugh-Nagumo-type systems (with P. Soravia). SIAM J. Math. Anal. **42** (1996), no. 5, 1341-1359.
44. Generalized motion by mean curvature as a macroscopic limit for stochastic Ising models with long range interactions and Glauber dynamics (with M. Katsoulakis). Comm. Math. Physics **169** (1995), no. 1, 61-97.
45. Effective geometric front dynamics for premixed turbulent combustion with separated velocity scales (with P. Embid and A. Majda). Comb. Sci. Tech. **103** (1995) 85-115.
46. Comparison of turbulent flame speeds from complete averaging and the G-equation (with P. Embid and A. Majda). Phys. of Fluids **7** (1995), no. 8, 2052-2060.
47. Front propagation for reaction-diffusion arising in combustion theory (with G. Barles and C. Georgelin). Asymptot. Anal. **14** (1997), no. 3, 277-292.
48. Existence and stability of entropy solutions for the hyperbolic systems of isentropic gas dynamics in Eulerian and Lagrangian coordinates (with P.-L. Lions and B. Perthame). Comm. Pure Appl. Math. **49**, no. 6. (1996) 599-638.
49. Weak stability of isentropic gas dynamics system for $\gamma = 5/3$ (with P.-L. Lions and B. Perthame). *Progress in elliptic and parabolic partial differential equation (Capri, 1994)*, 184–192, Pitman Res. Notes Math. Ser., **350**, Longman, Harlow, 1996.
50. Interface dynamics in phase transitions. *Proceedings of the International Congress of Mathematicians, Vol. 1,2 (Zurich, 1994)*, 1133-1144, Birkhäuser, Basel, (1995).
51. Bounds on enhanced turbulent flame speeds for combustion with fractal velocity fields (with A. Majda). J. Stat. Phys. **83** (1996) 933-954.
52. Front propagation: Theory and Applications. *Viscosity solutions and applications (Montecatini Terme, 1995)*, Lecture Notes in Math., 1660, Springer, Berlin, 1997.
53. Stochastic Ising models and anisotropic front propagation (with M. Katsoulakis). J. Statist. Phys. **87** (1997), no. 1-2, 63-89.
54. A new approach to generalized front propagation problems: Theory and applications (with G. Barles). Arch. Rational Mech. Anal. **141** (1998), no. 3, 237-296.
55. Examples and counterexamples for Huygens principle in premixed combustion (with P. Embid and A. Majda), Combust. Sci. Tech. **120** (1996) 273-303.
56. Threshold dynamics type approximation schemes for propagating fronts (with H. Ishii and G.xPires). J. Math. Soc. Japan **51** (1999), no. 2, 267-308.
57. Two-player, zero sum differential games and viscosity solutions, *Stochastic and differential games*, 69–104, Ann. Internat. Soc. Dynam. Games, 4, Birkhäuser Boston, Boston, MA, 1999.
58. Fully nonlinear stochastic partial differential equations (with P.-L. Lions). C.R. Acad. Sci. Paris Ser. I Math **326** (1998), no. 9, 1085-1092.
59. A limiting case for velocity averaging (with B. Perthame). Ann. Sci. École Norm. Sup. (4) **31**, no. 4, (1998) 591-598.

60. Remarks on the Dirichlet problem for quasilinear elliptic and parabolic equations (with G. Barles and E. Rouy). *Stochastic analysis, control, optimization and applications*, 209–222, Systems Control Found. Appl., Birkhäuser, Boston, Boston, MA, 1999.
61. Un cas limite des lemmes de compacite en moyenne motive par la formulation cinetique de systemes hyperbolique (French) (with B. Perthame). Journees "Equations aux Derivees Partielles" (Saint Jean–de–Monts) (1997), Exp. No. XII, Ecole Polytech., Palaiseau, 1997.
62. Flame fronts in turbulent combustion models with fractal velocity fields (with A. J. Majda). Comm. Pure Appl. Math **51** (1998), no. 11-12, 1337-1348.
63. A limiting case for the averaging lemma motivated by the kinetic formulation of some classical systems in fluid mechanics (with B. Perthame). *Dynamical systems, plasma and gravitation* (Orleans La Source. 1997) 55–61, Lect. Notes in Phys., **518**, Springer, Berlin, 1999.
64. Finite volume schemes for Hamilton-Jacobi equations (with G. Kossioris and Ch. Makridakis). Numer. Math. **83** (1999), no. 3, 427–442.
65. Fully nonlinear stochastic partial differential equations: non-smooth equations and applications (with P.-L. Lions). C.R. Acad. Sci. Paris Ser. I **327** (1998), no. 8, 735-741.
66. The effect of turbulence on mixing in prototype reaction diffusion systems (with A. Majda). Comm. Pure Appl. Math. **53** (2000), no. 10, 1284-1304.
67. On the large time behavior of solutions Hamilton-Jacobi equations (with G. Barles). SIAM J. Math. Anal. **31** (2000), no. 4, 925-939.
68. Stochastic homogenization for Hamilton-Jacobi equations and applications, Asymptot. Anal. **20** (1999), no. 1, 1-11.
69. Uniqueness of weak solutions of fully nonlinear stochastic partial differential equations (with P.-L. Lions). C. R. Acad. Paris Ser. I Math. **331** (2000), no. 10, 783-790.
70. Fully nonlinear stochastic partial differential equations with semilinear stochastic dependence (with P.-L. Lions). C. R. Acad. Paris Ser. I Math. **331** (2000), no. 8, 617-624.
71. Space-time periodic solutions and long-time behavior of solutions to quasilinear parabolic equations (with G. Barles). SIAM J. Math. Anal. **32** (2001), no. 6, 1311-1323.
72. Equations aux derivees partielles stochastiques nonlineaires et solutions de viscosite (with P.-L. Lions). *Seminaire: Equations aux Derivees Partielles*, 1998-1999, Exp. No. I, Semin. Equ. Deriv. Partielles, Ecole Polytech., Pallaiseau, 1999.
73. Some counterexamples on the asymptotic behavior of the solutions of Hamilton-Jacobi equations (with G. Barles). C.R. Acad. Sci. Paris Ser. I Math **330** (2000), no. 11, 963-968.
74. Viscosity solutions of fully nonlinear stochastic partial differential equations, *Viscosity solutions of differential equations and related topics (Japanese) Kyoto, 2001* Surikaisekikenky Kokyuroku **1287** (2002) 58-65.
75. Recent developments in the theory of front propagation and its applications, *Modern methods in scientific computing and applications (Montreal, QC, 2001)*, 397–449, NATO Sci. Ser. II Math. Phys. Chem., 75, Kluwer Acad. Publ., Dordrecht, 2002.
76. Correctors for the homogenization theory of Hamilton-Jacobi equations (with P.-L. Lions). Comm. Pure Appl. Math. **56** (2003), no. 10, 1501-1524.
77. Uniqueness of motion by mean curvature perturbed by stochastic noise (with N. Yip). Ann. Inst. H. Poincaré Anal. Non Lineaire **21** (2004), no. 1, 1-23.
78. Dissipative and entropy solutions to non-isotropic degenerate parabolic balance laws (with B. Perthame). Arch. Ration. Mech. Anal. **170** (2003), no. 4, 359-370; Attendum to: "Dissipative and entropy solutions to non-isotropic degenerate parabolic balance laws"

[Arch. Ration. Mech. Anal. 170 (2003), no. 4, 359–370] (with B. Perthame). Arch. Ration. Mech. Anal. **204** (2004), no. 3, 443-447.

79. Homogenization for fully nonlinear, second-order elliptic and parabolic partial differential equations in stationary ergodic media (with L. Caffarelli and L. Wang). Comm. Pure Appl. Math. **58** (2005), no. 3, 319-361.
80. Homogenization for "viscous" Hamilton-Jacobi equations in stationary, ergodic media (with P.-L. Lions). Comm. Partial Differential Equations **30** (2005), no. 1-3, 335-376.
81. Front propagation for a jump process arising in spatial ecology (with B. Perthame). Discrete Contin. Dyn. Syst. **13** (2005), no. 5, 1235-1246.
82. Large time behavior for viscous and non-viscous Hamilton-Jacobi equations forced by additive noise (with N. Dirr). SIAM J Math Anal **37** (2005), no. 3, 777-796.
83. Homogenization of degenerate second-order pde in periodic and almost periodic environments and applications (with P.-L. Lions). Ann. Inst. H. Poincaré, Anal. Non Lineaire, **22** (2005), no. 5, 667-677.
84. Recent developments in the theory of homogenization for fully nonlinear first- and second-order pde in random environments. Boletin de la Sociedad Espanola de Matematica Aplicada **34** (2006), 81–90.
85. A rate of convergence for monotone finite difference approximations to fully nonlinear uniformly elliptic pde (with L. Caffarelli), Comm. Pure Appl. Math. **LXI** (2008), no. 1, 1-17.
86. Ergodic problems and periodic homogenization for fully nonlinear equations in half-space domains with Neumann boundary conditions (with G. Barles, F. Da Lio and P.-L. Lions), Indiana Univ. Math. Journal **57** (2008), no. 5, 2355–2376.
87. Asymptotic and numerical homogenization (with B. Engquist), Acta Numer. **17** (2008), 147-190.
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