Curriculum vitae of Benoît Pausader
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Birth date: october 3, 1982.
French citizen.
Address:
Kassar House, 151 Thayer street
Providence, RI, 02912, USA
email: benoit.pausader@gmail.com
webpage: https://www.math.brown.edu/∼benoit.pausader/

Education:
2002: École normale supérieure de Lyon.
2004: Erasmus semester, Uppsala university.
2005: Agrégation de mathématique.
      Master of pure and applied mathematics.
2008: PhD defense, advisor: Emmanuel Hebey, university of Cergy-Pontoise.

Position:
2006: Assistant moniteur normalien, Cergy-Pontoise university.
2008: Tamarkin assistant professor, Brown University.
2011: Courant Instructor, New York University.
2012: Chargé de recherche, CNRS, U. Paris 13 (on leave 2013-...).
2013: Assistant professor, Princeton University.
2015: Associate professor, Brown University.

Publications:
[**1**] Scattering and the Levandosky-Strauss conjecture for fourth order nonlinear wave equations, *J. Differential Equations*, 241 (2), (2007), 237–278.
[**2**] Global well-posedness for energy critical fourth-order Schrödinger equations in the radial case, *Dynamics of PDE*, 4 (3), (2007), 197–225.
[**3**] The focusing energy-critical fourth-order Schrödinger equation with radial data, *Discrete Contin. Dyn. Syst.* 24 (2009), no. 4, 1275–1292.
[**4**] The cubic fourth-order Schrödinger equation, *J. Funct. Anal.* 256 (2009), 8, 2473–2517.
[**5**] Analyticity of the nonlinear scattering operator (with W.A. Strauss), *Discrete Contin. Dyn. Syst.* 25 (2009), no. 2, 617–626.
[**6**] Scattering for the Beam equation in small dimensions, *Indiana. Univ. Math. J.*, 59 (2010), no. 3, 791–822.
[**7**] The mass-critical fourth-order Schrödinger equation in high dimensions (with S. Shao), *J. Hyp. Diff. Equ.*, 7 (2010), no. 4, 651–705.
[**8**] The linear profile decomposition for the fourth order Schrödinger equation (with J.C. Jiang and S. Shao), *J. Differential Equations* 249 (2010), 2521–2547.
[**9**] Global Smooth Ion Dynamics in the Euler-Poisson System (with Y. Guo), *Comm. Math. Phys.* 303 (2011), 89–125.
[**10**] On the global well-posedness of energy-critical Schrödinger equations in curved spaces (with A. Ionescu and G. Staffilani), *Analysis and PDE*, Vol. 5 (2012), no. 4, 705–746.
[**11**] Global well-posedness of the energy-critical defocusing NLS on $\mathbb{R} \times \mathbb{T}^3$, (with A. Ionescu), *Comm. Math. Phys.*, 312 (2012), no. 3, 781–831.

[**12**] The energy-critical defocusing NLS on $\mathbb{T}^3$, (with A. Ionescu), *Duke Math. J.*, 161 (2012), no. 8, 1581–1612.

[**13**] The Euler–Poisson system in $2D$: global stability of the constant equilibrium solution (with A. Ionescu), *Int. Math. Res. Not.*, 2013 (2013), 761–826.

[**14**] Non-neutral global solutions for the electron Euler-Poisson system in $3D$ (with P. Germain and N. Masmoudi), *SIAM J. Math. Anal.* 45-1 (2013), 267–278.

[**15**] Dynamics of particle settling and resuspension in viscous liquid films, (with N. Murisic, D. Peschka and A.L. Bertozzi), *J. Fluid Mech.* 717 (2013), 203–231.

[**16**] Scattering theory for the fourth-order Schrödinger equation in low dimensions (with S. Xia), *Nonlinearity*, 26 (2013), no. 8, 2175–2191.

[**17**] On scattering for the quintic defocusing nonlinear Schrödinger equation on $\mathbb{R} \times \mathbb{T}^2$ (with Z. Hani), *Comm. Pure and Appl. Math.* 67 (2014), no. 9, 1466–1542.

[**18**] Global solutions of quasilinear systems of Klein–Gordon equations in $3D$ (with A. Ionescu), *J. Eur. Math. Soc.*, 16, (2014), no. 11, 2355–2431.

[**19**] Global regularity for the energy-critical NLS on $\mathbb{S}^3$ (with N. Tzvetkov and X. Wang), *Ann. Inst. H. Poincaré Anal. Non Linéaire* 31 (2014), no. 2, 315–338.

[**20**] Topography influence on the Lake equations in bounded domains (with C. Lacave and T. N'Guyen), *J. Math. Fluid Mech.* 16 (2014), no. 2, 375–406.

[**21**] Global solutions of certain plasma fluid models in $3D$ (with Y. Guo and A. Ionescu), *J. Math. Phys.* 55, 123102 (2014).

[**22**] Modified scattering for the nonlinear Schrödinger equation on product space and applications (with Z. Hani, N. Tzvetkov and N. Visciglia), *Forum of Math., Pi*, Vol. 3 / 2015, e4.

[**23**] Global solutions of the Euler–Maxwell two-fluid system in 3D (with Y. Guo and A. Ionescu), *Annals of Math.*, (2) 183 (2016), 377–498.

[**24**] Discrete Schrödinger equation and ill-posedness for the Euler equation (with I.J. Jeong), *DCDS-A*, 37 (2017), no. 1, 281–293.

[**25**] The Euler–Maxwell system for electrons: global solutions in $2D$ (with Y. Deng and A. Ionescu), *Arch. Rational Mech. Anal.* (2017) 225–771.

[**26**] Global solutions of the gravity-capillary water wave system in 3 dimensions (with Y. Deng, A. Ionescu and F. Pusateri), *Acta Math.*, to appear.

Preprints:

[**27**] On the global regularity for a Wave-Klein-Gordon coupled system (with A. Ionescu), preprint 2017.

[**28**] The profile decomposition for the hyperbolic Schrödinger equation (with B. Dodson, J. Marzuola and D. Spirn), preprint 2017.

Expository articles:

[**1**] An introduction to fourth order nonlinear wave equations, (with E. Hebey), available at http://www.math.brown.edu/∼benoit/

[**2**] Scattering for the Beam equation, *Proceedings of GDR "analyse des équations aux dérivées partielles"*, Évian, 2008.

[**3**] Growing Sobolev norms for the cubic defocusing Schrödinger equation. Séminaire: Équations aux Dérivées Partielles. (with Z. Hani, N. Tzvetkov and N. Visciglia) 2013–2014, Exp. No. X VI, 11 pp., Sémin. Équ. Dériv. Partielles École Polytech., Palaiseau, 2014.

Invited talks:
2007: Nonlinear hyperbolic equations and related topics, SNS Pisa.
PDE seminar, Brown U.
PDE and Mathematical Physics seminar, University of Paris 13.
Analysis seminar, ETH Zurich.
2008: Analysis and geometry seminar, Nice U.
GDR Analyse des équations aux dérivées partielles, Évian.
PDE seminar, Brown U.
2009: Analysis seminar, Princeton U.
AMS session "Effective Dynamics and Interactions of localized structures in
Schrödinger type equations", Worcester.
Analysis seminar, MIT.
Analysis seminar, Brown U.
AMS session "Fluid dynamics", UC Riverside.
Analysis seminar, UConn, Storrs.
Analysis seminar, U. Wisconsin, Madison.
2010: Analysis seminar, U. of Tunis.
Analysis seminar, McGill U.
PDE seminar, U. Minnesota, Minneapolis.
Annual FRG meeting, Brown U.
PDE seminar, Beijing International Center for Mathematical Research,
Beijing.
Analysis seminar, Iapcm, Beijing.
Analysis seminar, Brown U.
Analysis seminar, Princeton U.
Analysis seminar, UT Austin.
Analysis seminar, Cornell U.
2011: Colloquium, UBC, Vancouver.
Colloquium, Michigan State U.
Analysis seminar, Courant institute.
Brown/Paris 6 videoconference seminar, Brown U.
AMS session "Harmonic analysis and PDE", Statesboro, GA.
Nonlinear analysis and PDE seminar, Paris 6 - 7 - ENS.
PDE seminar, Rennes U.
Brown/B-U dynamical system seminar.
Analysis seminar, Princeton U.
Applied Analysis and Computational Math seminar, UMass, Amherst.
Analysis seminar, UCLA.
Peking University Summer School, Beijing.
International Workshop on PDE and Dynamical Systems, Kunming, China.
Analysis seminar, Courant Institute.
Analysis seminar, Princeton U.
AMS session "Harmonic analysis and PDE", Salt Lake city, UT.
2012: Séminaire Laurent Schwartz, IHES.
Geometric Analysis and PDE seminar, Cambridge U.
Meeting "Nonlinear Evolution Problems", Oberwolfach.
Séminaire EDP non-linéaires, Paris 13.
International Workshop on PDE and Dynamical Systems, Mianyang, China.

GDR "RAS", CIRM, Luminy.
ERC BlowDiSol, Rome.
Séminaire d'analyse, U. Lille.
Séminaire AGM, U. Cergy.
2013: 4-th itinerant workshop on PDE's, Rome.
CNA seminar, Carnegie Mellon U.
Brown PDE workshop, Brown U.
Analysis seminar, U. Paris-11, Orsay.
Conference "Handdy", CIRM, Luminy.
Meeting "Nonlinear waves and dispersive equations", Oberwolfach.
Fluids seminar, Princeton U.
Analysis seminar, Princeton U.
Analysis seminar, U. Penn.
Analysis seminar, Courant Institute.
2014: Analysis seminar, IMPA.
AMS session "Dispersive and geometric PDE", Baltimore.
Colloquium, Brown U.
Analysis seminar, UNC.
CIRM, Luminy,
Workshop "Harmonic analysis methods in dispersive PDEs", HIM, Bonn.
AMS sessional meeting, SFU.
Workshop "Asymptotics for Nonlinear Geometric PDEs", SNS Pisa.
Ergodic theory and statistical mechanics seminar, Princeton U.,
2015: PDE workshop, Brown U.,
Session "Long time dynamics of nonlinear dispersive waves", IMACS, Athens.
Analysis seminar, Georgia Tech,
Conference "Longtime behavior of nonlinear waves", Bielefeld U.
Conference "Water waves and related fluid models", CMI, Oxford.
Workshop "New challenges in PDE: deterministic dynamics and randomness in high and infinite dimensional systems", MSRI, Berkeley.
PDE seminar, UC Davis.
Siam PDE Meeting, Scottsdale, AZ.
2016: Séminaire "Géométrie, EDP et Physique mathématique", U. Cergy.
Colloquium, Kansas U.
Conférence "Théorie spectrale et physique mathématique", U. Cergy.
AMS sectional meeting, Minneapolis.
2017: ICERM seminar
Workshop "On the essence of $u \cdot \nabla u$", U. Virginia.
GDR "Analyse des EDP", Roscoff.
Workshop on Nonlinear Waves, Oberwolfach.
Conference: "AGM-LPTM: the first 25 years", U. Cergy.
CIRM, Luminy.
Session "nonlinear dispersive PDEs", Math. congress of America, Montreal.
Special session on dispersive equations, AMS Sessional meeting, U. Buffalo
Conference "Waves, Spectral Theory and Applications Part 2", Chapel Hill.
Physics Colloquium, UMass Boston.

Teaching experience:

2006: Association "Math En Jean".
    Basic Calculus.
2007: Association "Math En Jean".
    Humanitarian volunteering in Madagascar.
    Calculus, prépa ensi.
    Series.
2008: Calculus, prépa ensi.
    Intermediate calculus (for engineers).
2009: Linear algebra, Honors calculus.
2010: Analysis.
    Linear Algebra, 1D Calculus (for engineers).
2011: PDE.
    Tools for dispersive equations (summer graduate course, Peking University).
    Calc II.
2013: NLS in different geometries (summer graduate course, U. Lille).
    Calc II.
2014: Calc II.
2015: Funct. Analysis
    Topics on quasilinear dispersive equations.
2016: Calc III.
    Asymptotic behavior of dispersive equations (short course, IHES).
2017: Calc III., ODE, EDP-2, Real Analysis.
2018: Functional analysis.

Invitations in other departments:

2007: Scuola normale superiore di Pisa.
    Brown University.
    ETH Zurich.
2009: MIT.
    UW, Madison.
2010: Université de Tunis.
    UMinn, Minneapolis.
    Iapcm, Beijing.
    UCLA, Los Angeles.
2011: Princeton University.
    Peking University.
2012: Princeton University.
    Peking University.
2014: HIM, Bonn.
2015: MSRI, Berkeley.
2016: U. Cergy.
    IHES, Bures sur Yvettes.
2018: ENS Paris.

Languages:
French, English, Spanish.

Awards:
NSF- Grant (DMS- 1069243, DMS- 1362940, DMS-1700282).
Member of ANR "SchEq" and "Anae".
Sloan Research Fellowship.