

## ΒΙΟΓΡΑΦΙΚΟ ΣΗΜΕΙΩΜΑ

ΝΙΚΟΛΑΟΣ ΤΖΙΡΑΚΗΣ

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ΣΥΝΤΟΜΟ ΒΙΟΓΡΑΦΙΚΟ: Γεννήθηκα στο Ηράκλειο της Κρήτης το 1975. Αποφοίτησα από το "Λύκειο ο Κοραής" το 1993. Εισήχθηκα στην σχολή μηχανολόγων μηχανικών του Εθνικού Μετσόβιου Πολυτεχνείου. Η διπλωματική μου εργασία ήταν πάνω σε θέματα κλασσικής Αρμονικής Ανάλυσης με τον καθηγητή Ιωάννη Σαραντόπουλο. Κατόπιν ολοκλήρωσα τις μεταπτυχιακές μου σπουδές στο κρατικό πανεπιστήμιο της Μασσαχουσέτης απ' όπου και έλαβα μάστερ και διδακτορικό στα μαθηματικά, και συγκεκριμένα στις εφαρμογές της Αρμονικής Ανάλυσης στις μερικές διαφορικές εξισώσεις υπό την επίβλεψη της **Andrea Nahmod**. Ως μεταδιδακτορικός φοιτητής ήμουν στο Ινστιτούτο Ανωτέρων Σπουδών του Πρίνστον υπό την καθοδήγηση του **Jean Bourgain** (Fields Medal 1994) και αργότερα την διετία 2005-2007 στο πανεπιστήμιο του Τορόντο υπό τον **James Colliander**. Το 2007 διορίστικα επίκουρος καθηγητής στο πανεπιστήμιο του Ιλλινόις καταλαμβάνοντας τη βαθμίδα του τακτικού καθηγητή το 2018. Η ερευνητική μου περιοχή είναι οι μερικές διαφορικές εξισώσεις διασποράς και η αρμονική ανάλυση. Έχω συγγράψει ένα από τα βασικά βιβλία στην περιοχή από τις εκδόσεις του πανεπιστημίου του Καίμπριτζ. Έχω μακρά εμπειρία σε διοικητικές θέσεις εντός και εκτός του μαθηματικού τμήματος και συγκεκριμένα υπηρέτησα στη γερουσία του πανεπιστημίου του Ιλλινόις, ήμουν δις μέλος της εκτελεστικής επιτροπής του τμήματος (το ανώτερο συμβούλιο διοίκησης του τμήματος) και έχω διατελέσει επί πολλά έτη πρόεδρος του τομέα εφαρμοσμένων μαθηματικών του τμήματός μου. Οι επαγγελματικές μου δραστηριότητες περιγράφονται παρακάτω.

ΗΜΕΡΟΜΗΝΙΑ ΓΕΝΝΗΣΗΣ:	05/10/1975
ΕΚΠΑΙΔΕΥΣΗ:	2004 Ph.D. in Mathematics, University of Massachusetts, Amherst. 2001 M.A. in Mathematics, University of Massachusetts, Amherst. 1999 B.S/M.S. in Mechanical Engineering, National Technical University of Athens, Greece.
ΔΙΔΑΚΤΟΡΙΚΗ ΔΙΑΤΡΙΒΗ:	Global well-posedness for some dispersive partial differential equations.
ΕΡΕΥΝΗΤΙΚΗ ΠΕΡΙΟΧΗ:	Harmonic Analysis and Partial Differential Equations.

ΣΥΜΒΟΥΛΟΙ:

- Ph. D. advisor, Professor Andrea Nahmod.
- Postdoctoral advisor, IAS Princeton, Professor Jean Bourgain.
- Postdoctoral advisor, University of Toronto, Professor James Colliander.

ΑΠΑΣΧΟΛΗΣΗ

- 2019 –2026 University of Illinois at Urbana-Champaign, Professor.
- 2013 –2018 University of Illinois at Urbana-Champaign, Associate Professor.
- 2007 – 2013 University of Illinois at Urbana-Champaign, Assistant Professor.
- 2005 – 2007 University of Toronto, Post–Doctoral Fellow.
- 2004 – 2005 Membership at the Institute for Advanced Study at Princeton.
- 1999 – 2004 Teaching Assistant, University of Massachusetts.

ΒΡΑΒΕΙΑ ΚΑΙ ΔΙΑΚΡΙΣΕΙΣ

- Papakyriakopoulos Award for Undergraduate Thesis on Mathematics, 1999.
- Clay Mathematics Institute, Liftoff Appointment, Summer of 2004.
- NSF grant award DMS-0901222, 2009–2012.
- Illinois Research Board Award, 2014–2015.
- Simons Collaboration Grant for Mathematicians, 2015–2020.
- Arnold O. Beckman Award. Illinois Research Board Award 2018–2019.
- Arnold O. Beckman Award. Illinois Research Board Award 2025–2026.

ΔΙΔΑΚΤΟΡΙΚΟΙ ΦΟΙΤΗΤΕΣ

- Seckin Demirbas (joint with B. Erdogan).
- Erin Compaan.
- Wangseok Shin.

ΔΙΟΡΓΑΝΩΤΗΣ ΣΥΝΕΔΡΙΩΝ

- AMS Meeting, Fall 2009, Waco, Texas.
- Midwest PDE seminar, March 18-20, 2011, Urbana, Illinois.
- SIAM conference: Analysis of PDE, November 14-17, 2011, San Diego, CA.
- SIAM conference: Analysis of PDE, December 7-10, 2013, Florida.
- Midwest PDE seminar, October 18-19, 2014, Urbana, Illinois.

ΣΗΜΑΝΤΙΚΕΣ ΟΜΙΛΙΕΣ ΣΕ ΣΥΝΕΔΡΙΑ ΚΑΙ ΘΕΡΙΝΑ ΣΧΟΛΕΙΑ

- Second Prairie Analysis Seminar, Lawrence, Kansas.
- Applied Math Seminar, University of Massachusetts.
- Applied Math Seminar, University of Toronto.
- Analysis Seminar, Princeton University.
- Harmonic Analysis and Mathematical Physics Seminar, UIUC.
- AMS Special Session on Nonlinear Waves, Miami, Florida..
- BIRS workshop in Schrödinger Evolution Equations, Banff, Canada.
- Young Mathematicians' conference in PDE and Dynamical systems III, Fields Institute.
- Applied Math Seminar, University of Massachusetts, Amherst.
- MIT PDE/Analysis Seminar.
- Canadian Mathematical Society, Winter Meeting 2006.
- PDE Seminar, University of Maryland..
- Mathematics Colloquium, University of Illinois at Urbana-Champaign..
- Mathematics Colloquium, University of New Mexico.
- Mathematics Colloquium, SUNY Buffalo.
- Mathematics Colloquium, University of California, Irvine.
- Analysis Seminar, Georgia Institute of Technology.

- Analysis Seminar, John Hopkins University.
- PDE Seminar, University of Maryland.
- BIRS: Asymptotics and Singularities in Nonlinear and Geometric Dispersive Equations.
- Analysis Seminar, University of Texas, Austin.
- Carolina Meeting on Harmonic Analysis and PDE, Chapel Hill.
- AMS Meeting, San Francisco.
- AMS Meeting, Waco, Texas, October 2009 (Organizer).
- AMS Meeting, Lexington.
- Analysis Seminar, National Technical University of Athens, Greece.

Τουλάχιστον 4-5 διαλέξεις και διοργάνωση θερινών σχολείων έρευνας).

- Summer School, South Korea, Sogang University (4 lectures).
- SIAM Meeting, Philadelphia.
- PDE seminar, UNC, Chapel Hill.
- IMACS conference on nonlinear waves, Georgia.
- Analysis seminar, University of Crete, Greece.
- Partial Differential Equations seminar, National Technical University of Athens.
- Summer School, University of Texas (5 lectures).
- Control on Dispersive Equations, Maringa-Parana, Brazil.
- SIAM meeting in San Diego, California.
- AMS meeting in Washington DC.
- Oberwolfach Workshop ID 1220: Nonlinear Evolution equations, Germany.
- Applied Analysis & Computation Seminar: University of Massachusetts, Amherst.
- SIAM meeting in Lake Buena Vista, Florida (Organizer).
- Geometric Analysis, Calculus of Variations and PDEs, University of Sussex.

- Analysis Seminar, University of Texas.
- MSRI, Introduction to Nonlinear Dispersive equations (10 lectures), Berkeley.
- Analysis Seminar, University of Texas.
- Colloquium University of Cincinnati.
- Colloquium, National Technical University of Athens, Athens, Greece.
- Conference: Nonlinear dispersive PDE; long time dynamics, boundary value problems and integrability, Istanbul, Turkey.
- Nonlinear waves and coherent structures, SIAM, Philadelphia..
- The Tenth IMACS International Conference on Nonlinear Evolution Equations and Wave Phenomena: Computation and Theory. Athens, Georgia.
- French–American Conference on nonlinear Dispersive PDEs. CIRM, France.
- Analysis Seminar and Summer School (4 lectures), University of Athens.
- MSRI and the Istituto Nazionale di Alta Matematica Summer School, Dispersive PDE, Cortona Italy, Summer 2017 (10 lectures).
- Analysis Seminar. University of Toronto.
- 10 lectures on initial–boundary value problems for dispersive PDE. University of L’Aquila, GSSI, Italy
- Analysis Seminar and Summer School (4 lectures), National Technical University of Athens.
- PDE and Mathematical Physics seminar, HMU, Crete, @ lectures.
- Colloquium, Western Washington University.
- University of Illinois at Urbana–Champaign.  
Multiple times in Harmonic Analysis, PDE and Graduate student seminars.

#### ΑΛΛΕΣ ΟΜΙΛΙΕΣ

- Applied Math Seminar, University of Massachusetts, March 2004.
- Applied Math Seminar, University of Toronto, November 2006.

- Harmonic Analysis and Mathematical Physics Seminar, Part I, UIUC, October 2007.
- Harmonic Analysis and Mathematical Physics Seminar, Part II, UIUC, October 2007.
- Graduate Student Seminar, UIUC, March 2010.
- Harmonic Analysis and Differential Equations Seminar, UIUC, March 2013.
- Graduate Student Seminar, UIUC, October 2013.
- Graduate Student Seminar, UIUC, October 2016.
- HADES Seminar UIUC, 2022.
- Graduate Student Seminar, UIUC, March 2026.

#### ΣΥΜΜΕΤΟΧΗ ΣΕ ΣΥΝΕΔΡΙΑ, ΕΡΓΑΣΤΗΡΙΑ ΚΑΙ ΣΧΟΛΕΙΑ

- IAS/Park City Mathematics Institute Summer Session, at Park City, Utah, June 2003.
- The Fields Institute, Workshop on Nonlinear Wave Equations, Toronto, March 2004.
- BIRS workshop in Schrödinger Evolution Equations, Banff April 2006.
- BIRS workshop in Asymptotics and Singularities in Nonlinear and Geometric Dispersive Equations, Banff August 2008.
- The Fields Institute, Conference on Non-linear Phenomena in Mathematical Physics: Dedicated to Cathleen Synge Morawetz on her 85th birthday, Toronto September 2008.
- Summer School, South Korea, Sogang University, July 2010.
- Control on Dispersive Equations, Maringa-Parana, Brazil, September 2011.
- Summer School, University of Texas, July 2011.
- Oberwolfach Workshop ID 1220: Nonlinear Evolution equations, Germany, May 2012.
- MSRI Summer School, Introduction to Nonlinear Dispersive equations, Berkeley, Summer 2014.
- Geometric Analysis, Calculus of Variations and PDEs, University of Sussex, March 2014.
- Harmonic Analysis & Partial Differential Equations: Recent Developments & Future Directions. A conference in honor of C.E. Kenig, September 2014.
- MSRI: New challenges in PDE: Deterministic dynamics and randomness in high and infinite dimensional systems.

- French–American Conference on nonlinear Dispersive PDEs. CIRM, France. June 2017.
- MSRI and the Istituto Nazionale di Alta Matematica Summer School, Dispersive PDE. Cortona Italy, Summer 2017.
- Summer School on initial–boundary value problems for dispersive PDE. University of L’Aquila, GSSI, Italy, 2019.
- Illinois Geometry Lab. Organizer for two projects.

#### ΔΙΔΑΚΤΙΚΗ ΕΜΠΕΙΡΙΑ

##### **1999–2004 University of Massachusetts**

- Calculus I (for Sciences and Engineering students).
- Calculus II (for Sciences and Engineering students).
- Calculus III (for Sciences and Engineering students).
- Dynamical Systems (for Sciences and Engineering students).
- Calculus II (for Business students).

##### **2005–2007 University of Toronto**

- Multivariable Calculus.
- Single Variable Calculus.

##### **2007–2026 University of Illinois at Urbana-Champaign**

- Advanced Calculus (undergraduate).
- Differential Equations (undergraduate).
- Introduction to Partial Differential Equations (undergraduate).
- Topics Course in Dispersive Partial Differential Equations (graduate).
- Probability Theory (undergraduate).
- Partial Differential Equations (graduate).
- Analysis of Partial Differential Operators (graduate).
- The historical development of calculus (undergraduate).

- Reading Course: Dispersive Partial Differential Operators (thesis preparation).
- Honors Linear Algebra (undergraduate).

#### ΔΙΟΙΚΗΤΙΚΕΣ ΘΕΣΕΙΣ

##### 1. Δραστηριότητες καθοδήγησης:

- Summer of 2013. REGS on Dispersive Partial Differential Equations.
- Advisor for Erin Compaan, PhD student, 2012-2017.
- Advisor/host for Vanessa Barros, Visiting Scholar, 2014-2015.
- Samantah Xu, Visiting assistant professor at UIUC, Fall of 2014.
- Advisor for Gang Zhou, Visiting Assistant Professor, 2012-2013.
- Co-advisor for Seckin Demirbas, PhD student at the University of Illinois, 2010-2015.
- Advisor for Hee Yeon Kim, PhD student at the University of Illinois, 2014–2015.
- Advising Agus Soenjaya for summer of 2014, Master student at the University of Illinois.
- Member of the dissertation committee for Yi Hu, PhD student at the University of Illinois.
- Member of the dissertation committee for Temur Faruk, PhD student at the University of Illinois.
- Member of the dissertation committee for Seckin Demirbas, PhD student at the University of Illinois.
- Member of the dissertation committee for Lechao Xiao, PhD student at the University of Illinois.
- Member of the dissertation committee for Zhihui Xie, PhD student at the University of Texas.
- Member of the dissertation committee for Kenny Taliaferro, PhD student at the University of Texas.
- Member of the dissertation committee for Ebru Toprak, PhD student at the University of Illinois.
- Member of the dissertation committee for Erin Compaan, PhD student at the University of Illinois.
- Advising Matthew Ellis, PhD student University of Illinois, Fall 2017.
- Member of the dissertation committee for David Reiss, PhD student at the University of Toronto.
- Advising Wangseok Shin, PhD student University of Illinois, Fall 2022.
- Member of the dissertation committee for Ting-Yang Hsiao, PhD student at the University of Illinois.

- Member of the dissertation committee for Chi Huynh, PhD student at the University of Illinois.
  - Member of the dissertation committee for Shukun Wu, PhD student at the University of Illinois.
  - Member of the dissertation committee for Ryan McConnell, PhD student at the University of Illinois.
  - Member of the dissertation committee for Savana Ammons, PhD student at the University of Illinois.
  - Member of the dissertation committee for Kevin Lamaster, PhD student at the University of Illinois.
2. Θέσεις εσωτερικές στο πανεπιστήμιο του Ιλλινόις.
- Comprehensive Examination Committee on PDEs.
  - Math Election Committee (Chair).
  - Math Graduate Application Committee.
  - Math Picnic Committee.
  - Applied Mathematics Area Chair (multiple years).
  - Preliminary Ph. D. examination committee.
  - Capricious Grading committee.
  - Academic Disciplinary committee.
  - Math Honors Committee.
  - Math Postdoctoral Search Committee.
  - Math Prizes Committee. (Chair)
  - Executive Committee.
  - University of Illinois Senate.
  - Undergraduate Advising Committee.
  - Awards/Scholarships/Fellowships (Chair)
  - Promotion and Tenure Committee.
  - Tenured Stream Application Screening Committee.

- Associate of Illinois Geometry Lab.
3. Θέσεις εξωτερικές στο πανεπιστήμιο του Ιλλινόις .
- Faculty Senate, University of Illinois.
  - Reviewer for the Campus Research Board Awards.
  - Member of the dissertation committee for Zhihui Xie, PhD student at the University of Texas.
  - Judge for the Orals competition of the ICTM high school math contest, May 2013–19.
  - Member of the dissertation committee for Kenny Taliaferro, PhD student at the University of Texas.
  - Member of the dissertation committee for David Reiss, PhD student at the University of Toronto.
  - Reviewer for Grants at NSF, Analysis Division.
  - Reviewer for Grants at NSF, Applied Mathematics Division.
  - Reviewer for the Books and Articles of the American Mathematical Society.
  - Referee for first class math journals. List includes but is not limited to CPAM, JDE, Duke Math, IMRN, Transactions of AMS, Proceedings of AMS, JFA, Physica D, American Journal of Mathematics, SIAM Journals, CPDE, CMP, Ann. Inst. H. Poincare etc.

#### ΕΡΓΑΣΙΕΣ-ΣΗΜΕΙΩΣΕΙΣ-ΔΗΜΟΣΙΕΥΣΕΙΣ

1. *Near-linear Dynamics for Shallow Water Waves* , [www.arxiv.org/pdf/1002.3641](http://www.arxiv.org/pdf/1002.3641), (with M. B. Erdogan and V. Zharnitsky)
2. *The semi-linear Schrödinger equation*, [www.math.uiuc.edu/~tzirakis](http://www.math.uiuc.edu/~tzirakis), (with N. Pavlovic).
3. *The initial value problem for the KdV equation* , [www.math.uiuc.edu/~tzirakis](http://www.math.uiuc.edu/~tzirakis), (with B. Erdogan).
4. *Derivation of NLS from many quantum body systems*, [www.math.uiuc.edu/~tzirakis](http://www.math.uiuc.edu/~tzirakis), (with T. Chen and N. Pavlovic).

#### ΕΡΕΥΝΗΤΙΚΕΣ ΕΡΓΑΣΙΕΣ ΚΑΙ ΒΙΒΛΙΑ

1. *Smoothing for quasi-periodic dispersive equations in one dimension*, (with M. B. Erdogan) in preparation.
2. *Global well-posedness and almost conserved quantities for the fifth order KdV*, (with Wangseok Shin), preprint forthcoming.

3. *The initial–boundary value problem for the Zakharov equation on the half–plane* (with M. B. Erdogan), submitted to JMAA.
4. *Smoothing estimates for weakly nonlinear internal waves in a rotating ocean*, (with M. B. Erdogan), Journal of Mathematical Physics, Analysis, Geometry (2024) 20, no. 4, 405–422.
5. *Well–posedness for the Schrödinger–KdV system on the half–line*, (with E. Compaan and W. Shin), JMAA (2024), 537, no. 2, 128313.
6. *Low regularity well–posedness for dispersive equations on semi–infinite intervals*, (with Erin Compaan), CPAA (2023), 22, no. 8, 2481–2500.
7. *Sharp well–posedness of the biharmonic Schrödinger equation in a quarter plane*, (with Erin Compaan), Partial Differential Equations and Applications (2023), 4, no. 6, 28 pages.
8. *The fifth order KP–II equation on the half line*, (with M. B. Erdogan and T. B. Gurel), Differential and Integral Equations (2020), 33, no. 12, 555–596.
9. *Existence and uniqueness theory for the generalized KdV equation on the half line*, (with Erin Compaan), Physica D (2020), 402, 132208.
10. *Low–regularity global well–posedness for the Klein–Gordon–Schrödinger system on  $\mathbb{R}^+$* , (with Erin Compaan), Discrete and Continuous Dynamical Systems–Series A (2019), 39, no. 7, 3867–3895.
11. *The derivative nonlinear Schrödinger equation on the half line*, (with M. B. Erdogan and T. B. Gurel), Ann. Inst. H. Poincaré Anal. Non Linéaire (2018), 35, no. 7, 1947–1973.
12. *Smoothing for the fractional Schrödinger equation on the torus and the real line*, (with M. B. Erdogan and T. B. Gurel), Indiana Math Journal (2019), 68, no. 2, 369–392.
13. *Regularity properties of the Zakharov system on the half line*, (with M. B. Erdogan), Comm. Partial Differential Equations 42 (2017), no. 7, 1121–1149.
14. *Regularity properties of the cubic nonlinear Schrödinger equation on the half line*, (with M. B. Erdogan), J. Funct. Anal. 271 (2016), no. 9, 2539–2568.
15. *Well–posedness and nonlinear smoothing for the ”good” Boussinesq equation on the half–line*, (with Erin Compaan), J. Differential Equations 262 (2017) 5824–5859.
16. *Wellposedness theory of dispersive equations and applications*, (with M. B. Erdogan,) Book 200 pages, Cambridge Student Texts, Cambridge University Press, May 2016.
17. *Fractal solutions of the vortex filament equation*, (with V. Chousionis, and M. B. Erdogan), Proc. Lond. Math. Soc (3) 110 (2015), no. 3. 543–564.
18. *Existence and uniqueness theory for the fractional Schrödinger equation on the torus*, (with S. Demirbas, and M. B. Erdogan), Some topics in harmonic analysis and applications, 145–162, Adv. Lect. Math. (ALM), 34, Int. Press, Somerville, MA, 2016.
19. *The structure of global attractors for dissipative Zakharov systems with forcing on the torus*, (with M. B. Erdogan, J. Marzuola, and K. Newhall), SIAM J. Appl. Dyn. Syst. 14 (2015), no. 4, 1978–1990.
20. *Talbot effect for the cubic nonlinear Schrödinger equation on the torus*, (with M. B. Erdogan), Math. Res. Lett. 20 (2013), no. 6, 1081–1090.

21. *Smoothing and global attractors for the Zakharov system on the torus*, (with M. B. Erdogan), Anal. PDE 6 (2013), no. 3, 723–750.
22. *Long time dynamics for forced and weakly damped KdV on the torus*, (with M. B. Erdogan), Commun. Pure Appl. Anal. 12 (2013), no. 6, 2669–2684.
23. *Global Smoothing for the Periodic KdV Evolution*, (with M. B. Erdogan), Int. Math. Res. Not. IMRN 2013, no. 20, 4589–4614.
24. *Smoothing properties for dispersive partial differential equations and systems of equations*, Report on Oberwolfach Workshop ID 1220, May 2012: Nonlinear Evolution equations.
25. *Multilinear Morawetz identities for the Gross-Pitaevskii hierarchy*, (with T. Chen and N. Pavlovic), Contemp. Math., 581, Amer. Math. Soc., Providence, RI, 2012, 39–62.
26. *High frequency perturbation of cnoidal waves in KdV*, (with M. B. Erdogan and V. Zharnitsky), SIAM J. Math. Anal. 44 (2012), no. 6, 4147–4164.
27. *Nearly linear dynamics of nonlinear dispersive waves*, (with M. B. Erdogan and V. Zharnitsky), Phys. D 240 (2011), no. 17, 1325–1333.
28. *Near linear dynamics in KdV with periodic boundary conditions*, (with M. B. Erdogan and V. Zharnitsky), Nonlinearity 23 (2010), no. 7, 1675–1694.
29. *Energy conservation and blow-up of solutions for focusing GP hierarchies*, (with T. Chen and N. Pavlovic), Ann. Inst. H. Poincaré Anal. Non Linéaire 27 (2010), no. 5, 1271–1290.
30. *Remarks on global a priori estimates for the nonlinear Schrödinger equation*, (with J. Colliander and M. Grillakis), Proc. Amer. Math. Soc. 138 (2010), no. 12, 4359–4371.
31. *Existence of the wave operators in the energy space for the nonlinear Schrödinger and Hartree equations in low dimensions*, (with J. Holmer), J. Hyperbolic Differ. Equ. 7 (2010), no. 1, 117–138.
32. *Tensor products and correlation estimates with applications to nonlinear Schrödinger equations*, (with J. Colliander and M. Grillakis), Comm. Pure Appl. Math. 62 (2009), no. 7, 920–968.
33. *Improved interaction Morawetz inequalities for the cubic nonlinear Schrödinger equation on  $2d$* , (with J. Colliander and M. Grillakis), Int. Math. Res. Not. IMRN 2007, no. 23, Art. ID rnm090, 30 pp.
34. *Correction to “Global well-posedness and polynomial bounds for the defocusing  $L^2$ -critical nonlinear Schrödinger equation in  $1d$ ”*, (with D. De Silva, N. Pavlovic and G. Staffilani), Comm. Partial Differential Equations 33 (2008), no. 7-9, 1395–1429, Comm. Partial Differential Equations 36 (2011), no. 2, 293–303.
35. *Global well-posedness and polynomial bounds for the defocusing  $L^2$ -critical nonlinear Schrödinger equation in  $1d$* , (with D. De Silva, N. Pavlovic and G. Staffilani), Comm. Partial Differential Equations 33 (2008), no. 7-9, 1395–1429.
36. *Improved global well-posedness for the Zakharov and the Klein-Gordon-Schödinger systems*, (with Jim Colliander and Justin Holmer), Trans. Amer. Math. Soc. 360 (2008), no. 9, 4619–4638.

37. *Global well-posedness for the  $L^2$ -critical NLS in higher dimensions*, (with D. De Silva, N. Pavlovic and G. Staffilani), *Communications on Pure and Applied Analysis*, 6 (2007), no. 4, 1023–1041.
38. *Global well-posedness for a periodic nonlinear Schrödinger equation in 1d and 2d*, (with D. De Silva, N. Pavlovic and G. Staffilani), *Discrete and Continuous Dynamical Systems, Series A*. 19 (2007), no. 1, 37–65.
39. *On the collapse arresting the effects of discreteness*, (with P. G. Kevrekidis), *Math. Comput. Simulation* 69 (2005), no. 5-6, 553–566.
40. *Multi-linear almost diagonal estimates and applications*, (with Á. Bényi), *Studia Mathematica* 164. 1, (2004), 75-89.
41. *Mass concentration phenomenon for the quintic nonlinear Schrödinger equation in 1D*, *SIAM J. Math. Anal.* 37 (2006), no. 6, 1923–1946.
42. *Global well-posedness for the Klein-Gordon-Schrödinger system in dimensions 1, 2, and 3*, *Communications in Partial Differential Equations* 30 (2005), no. 4-6, 605–641.
43. *Global well-posedness for some dispersive partial differential equations*, Ph. D. Thesis, 2004, University of Massachusetts, Amherst.