

JAMES ELLIS COLLIANDER

A. Biographical Information

1. Personal Date of birth: Thursday 22 June 1967

<u>Home Address</u> 38 Wells Street Toronto, ON M5R-1P2 (416) 413-0032	<u>Office Address</u> Department of Mathematics University of Toronto Toronto, ON M5S-3G3 (416) 978-3645
---	--
2. Degrees

Ph.D., Math	1997	University of Illinois, Urbana-Champaign
B.A., Math and Physics	1989	Macalester College, <i>Highest Honors</i>
3. Employment

7/07–	Professor	University of Toronto
5/09	Professeur Invité	Institut Henri Poincaré, Paris
10/07	Professeur Invité	Université de Paris-Nord, Villetaneuse
5/07	Professeur Invité	Université de Paris-Sud, Orsay
4/04–6/07	Associate Professor	University of Toronto
8/05–12/05	Research Professor	Mathematical Sciences Research Institute
8/01–3/04	Assistant Professor	University of Toronto and Graduate School
8/97–7/01	C.B. Morrey Assistant Professor	University of California, Berkeley
6/99–7/99	Visiting Professor	Université de Cergy-Pointoise, France
8/97–12/97	Postdoctoral Research Fellow	Mathematical Sciences Research Institute
7/89–12/90	Research Physicist	U.S. Naval Research Laboratory
4. Honors

4/10	Outstanding Teaching Award, Arts & Science, University of Toronto
5/09	Professeur Invité, Institut Henri Poincaré, Paris
10/07	Professeur Invité, Université de Paris-Nord, Villetaneuse
5/07	McLean Award, University of Toronto
5/07	Professeur Invité, Université de Paris-Sud, Orsay
9/03–12/03	Visiting Member, Institute for Advanced Study
9/03–9/05	A.P. Sloan Research Fellowship

B. Academic History

1. Research Endeavours
Partial Differential Equations and Harmonic Analysis; especially maximal-in-time behavior and low regularity well-posedness properties of nonlinear evolution equations.

2. Research Awards

5/07	McLean Award, University of Toronto	\$100,000
4/07–3/12	N.S.E.R.C. Research Grant RGPIN 250233-07	\$145,000
8/05–12/05	Research Professorship, M.S.R.I.	
9/03–9/05	A.P. Sloan Research Fellowship	\$60,000 (U.S.)
9/03–12/03	Visiting Member, Institute for Advanced Study	
3/02–3/07	N.S.E.R.C. Research Grant RGPIN 250233-03	\$120,000
5/01–5/04	U.S. N.S.F. Grant DMS 0100595 (under F.M. Christ)	\$83,033 (U.S.)
1/02–1/05	University of Toronto Connaught New Staff Matching Grant	\$30,000
9/97–6/00	U.S. N.S.F. Postdoctoral Research Fellowship	\$75,000 (U.S.)
	<u>Advisors:</u> C. E. Kenig; L. C. Evans	
9/94–7/95	A.P. Sloan Doctoral Dissertation Fellowship	\$14,000 (U.S.)

C. Mentoring Activity

1. Postdoctoral Fellows

Pieter Blue	AY04-06	Pseudoconformal NLS
Adrian Butscher	AY02-03	Nonlinear Geometric PDE
Magdalena Czubak	AY08-11	Nonlinear Geometric PDE
Justin Holmer	8/04	Zakharov System; NLS Blowup in L^2
Hiro Oh	AY07-10	Nonlinear Dispersive PDEs
Sarah Raynor	AY02-03	NLS Blowup in H^s ; Nonelliptic NLS
Gideon Simpson	AY08-11	Dispersive PDEs
Wolfgang Staubach	AY02-03	NLS Blowup in L^2
Nikos Tzirakis	AY05-06	Zakharov System; Almost Conservation
J. Douglas Wright	Spring 04	NLS Blowup in H^s

2. Graduate Students

Brian Piggot	U. Toronto Ph.D. Candidate	Aspects of KdV
Geordie Richards	U. Toronto Ph.D. Student	NLS Scattering
Ian Zwiers	U. Toronto Ph.D. Student	NLS Blowup

3. International Visiting Students

Ann-Eva Christensen	Winter 2010	Aalborg University, Denmark
Ahmed-Amine Homman	Summer 2010	ENS (Lyon), France
Alessandro Selvitella	Spring 2010	SISSA, Italy
Jing Wang	Summer 2010	Tsinghua University, China

4. Undergraduate students mentored

W/09	Mitch Bushuk	Reading Course	Classical Field Theory
W/09	Yuri Cher	Reading Course	Classical Field Theory
W/09	Dan Fusca	Reading Course	Classical Field Theory
W/09	Jared Stang	Reading Course	Classical Field Theory
F/08	Faiyaz Hasan	Reading Course	Quantum Optics
S/06	Songhao Li	Summer N.S.E.R.C.	Classical Field Theory
S/06	Oliver Jovanovski	Summer N.S.E.R.C.	Fiber Optics
S/06	Kun Wang	Summer N.S.E.R.C.	Fiber Optics
S/05	Adam Bjorndahl	Summer N.S.E.R.C.	Nonlinear Dispersive PDE
S/04	Parul Laul	Summer N.S.E.R.C.	Mathematical Biology
S/02	Sam Kaufman	Summer N.S.E.R.C.	Nonlinear Dispersive PDE
S/02	Paul Lee		Nonlinear Dispersive PDE
S/02	Al Momin		Nonlinear Dispersive PDE

D. Scholarly and Professional Work

1. Refereed Articles

- 1 F. Bucholtz, J. Colliander, A. Dandridge, *Thermal noise spectrum of a fiber-optic magnetostrictive transducer*, Optics Letters, 16(6), 432–434, 1991.
- 2 J. Colliander, *Globalizing estimates for the periodic KPI equation*, Illinois Journal of Mathematics 40(4), 692–698, 1996.
- 3 J. Colliander, *The initial value problem for the Zakharov system*, Thesis, University of Illinois, 1997.
- 4 J. Bourgain and J. Colliander, *On wellposedness of the Zakharov system*, International Mathematics Research Notices, 96(11), 515–546, 1996.
- 5 J. Colliander, *Wellposedness for Zakharov systems with generalized nonlinearity*, Journal of Differential Equations, 148(2), 351–363, 1998.
- 6 J. Colliander and R. L. Jerrard, *Vortex dynamics for the Ginzburg-Landau-Schrödinger equation*, International Mathematics Research Notices, 98(7), 333–358, 1998.
- 7 J. Colliander and R. L. Jerrard, *Ginzburg-Landau Vortex Dynamics: weak stability and Schrödinger equation dynamics*, Journal d'Analyse Mathématique, 77, 129–205, 1999.
- 8 J. Colliander, G. Staffilani and H. Takaoka, *Global Wellposedness of KdV below L^2* , Mathematical Research Letters 6(5-6), 755–778, 1999.
- 9 J. Colliander, J.-M. Delort, C. E. Keing, G. Staffilani, *Bilinear estimates and applications to 2d NLS*, Transactions of the American Mathematical Society, 353(8), 3307–3325, 2001.
- 10 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Global well-posedness for KdV in Sobolev Spaces of negative index*, Electronic Journal of Differential Equations, Vol. 2001(2001), No. 26, 1–7, 2001.
- 11 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Global well-posedness for Schrödinger equations with derivative*, SIAM Journal of Mathematical Analysis, 33(3), 649–669, 2001.
- 12 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *A refined global well-posedness result for Schrödinger equations with derivative*, SIAM Journal of Mathematical Analysis, 34(1), 64–86, 2002.
- 13 J. Colliander and G. Staffilani, *Regularity bounds on Zakharov system evolutions*, Electronic Journal of Differential Equations, Vol. 2002(2002), No. 75, 1–11, 2002.
- 14 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Sharp Global well-posedness for KdV and mKdV on \mathbb{R} and \mathbb{T}* , Journal of the American Mathematical Society, **16**, 705–749, 2003. **
- 15 J. Colliander, G. Staffilani, C. Kenig, *On solutions for the Kadomtsev-Petviashvili I equation*, Moscow Mathematical Journal, **1**(4), 491–520, 2001. Errata: **4**(2), 529–530, 2004.

- 16 J. Colliander and C. E. Kenig, *The generalized KdV equation on the half-line*, Communications in Partial Differential Equations, **27** (11-12), 2187–2266, 2002.
- 17 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Multilinear estimates for periodic KdV equations and applications*, Journal of Functional Analysis, **211**(1), 173–218, 2004.
- 18 M. Christ, J. Colliander, T. Tao, *Asymptotics, frequency modulation, and low regularity ill-posedness for canonical defocusing equations*, American Journal of Mathematics, **125**(6), 1235–1293, 2003.
- 19 J. Colliander, C. Kenig, G. Staffilani, *Low regularity solutions for the Kadomtsev-Petviashvili I equation*, Geometric and Functional Analysis, **13**, 737–794, 2003. (*Errata*: Geom. Funct. Anal. 17 (2007), no. 3, 999–1000.)
- 20 J. Colliander, C. Kenig, G. Staffilani, *Local well-posedness for dispersion generalized Benjamin-Ono equations*, Differential and Integral Equations, **16**(12), 1441–1472, 2003.
- 21 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Almost conservation laws and global rough solutions to a nonlinear Schrödinger equation*, Mathematics Research Letters, **9**(5-6), 659–682, 2002.
- 22 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Polynomial upper bounds for the orbital instability of the 1D cubic NLS below the energy norm*, Discrete Contin. Dyn. Syst. **9**(1), 31–54, 2003.
- 23 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Polynomial upper bounds for the instability of the nonlinear Schrödinger equation below the energy norm*, Comm. Pure Appl. Anal., **2**(1), 33–50, 2003.
- 24 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Existence globale et diffusion pour l'équation de Schrödinger nonlinéaire répulsive cubique sur \mathbb{R}^3 en dessous l'espace d'énergie*, Journées Équations aux Dérivées Partielles, Exp. No. X, 14pp. Univ. Nantes, 2002.
- 25 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Global existence and scattering for rough solutions of a nonlinear Schrödinger equation on \mathbb{R}^3* , Communications on Pure and Applied Mathematics, **57**(8), 987–1014, 2004.
- 26 M. Christ, J. Colliander, T. Tao, *Ill-posedness for nonlinear Schrödinger and wave equations*, to appear Annales Henri Poincaré, 2005. **
- 27 J. Colliander, S. Raynor, C. Sulem, J.D. Wright, *Ground state mass concentration in the L^2 -critical nonlinear Schrödinger equation below H^1* , Mathematical Research Letters, **12**(2-3), 357–375, 2005.
- 28 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Global well-posedness and scattering for the energy-critical nonlinear Schrödinger equation in \mathbb{R}^3* , Annals of Mathematics, (2) 167 (2008), no. 3, 767–865.
- 29 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Notes on symplectic non-squeezing of the KdV flow*, Journées Équations aux Dérivées Partielles”, Exp. No. XIV, 15 pp., cole Polytech., Palaiseau, 2005.

- 30 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Finite-dimensional approximations to the periodic mKdV and KdV equations, and applications to symplectic non-squeezing of the KdV flow*, Acta Math. 195 (2005), 197–252.
- 31 P. Blue, J. Colliander, *Global well-posedness in Sobolev space implies global existence for weighted L^2 initial data for L^2 -critical NLS*, Communications in Pure and Applied Analysis, 5(4), (2006), 691–708.
- 32 J. Colliander, *On blowup solutions of NLS with low regularity initial data*, Harmonic analysis, partial differential equations, and related topics, 43–50, Contemp. Math., 428, Amer. Math. Soc., Providence, RI, 2007.
- 33 J. Colliander, J. Holmer, N. Tzirakis, *Low regularity global well-posedness for the Zakharov and Klein-Gordon-Schrödinger systems*, Trans. Amer. Math. Soc. 360 (2008), no. 9, 4619–4638.
- 34 J. Colliander M. Keel, G. Staffilani, H. Takaoka, T. Tao, *The energy-critical nonlinear Schrödinger equation in \mathbb{R}^3* . Recent developments in nonlinear partial differential equations, 69–80, Contemp. Math., 439, Amer. Math. Soc., Providence, RI, 2007.
- 35 J. Colliander, J. Holmer, M. Visan, X. Zhang, *Global well-posedness for energy subcritical one dimensional NLS equations*, Commun. Pure Appl. Anal. 7 (2008), no. 3, 467–489.
- 36 J. Colliander, S. Roudenko, *Mass concentration window size and Strichartz norm divergence rate for the L^2 -critical nonlinear Schrödinger equation*. J. Hyperbolic Differ. Equ. 4 (2007), no. 4, 613–627.
- 37 J. Colliander, M. Grillakis, N. Tzirakis, *Improved interaction Morawetz inequalities for the cubic nonlinear Schrödinger equation on \mathbb{R}^2* , Int. Math. Res. Not. IMRN 2007, no. 23, Art. ID rnm090, 30 pp.
- 38 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Resonant decompositions and the I-method for cubic nonlinear Schrödinger on \mathbb{R}^2* , Discrete Contin. Dyn. Syst. 21 (2008), no. 3, 665–686.
- 39 J. Colliander, A.D. Ionescu, C.E. Kenig, G. Staffilani, *Weighted low-regularity solutions of the KP-I initial-value problem*, Discrete Contin. Dyn. Syst. 20 (2008), no. 2, 219–258.
- 40 M. Christ, Michael; J. Colliander, T. Tao, *A priori bounds and weak solutions for the nonlinear Schrödinger equation in Sobolev spaces of negative order*. J. Funct. Anal. 254 (2008), no. 2, 368–395.
- 41 J. Colliander, M. Grillakis, N. Tzirakis, *Tensor products and correlation estimates with applications to nonlinear Schrödinger equations*, Communications on Pure and Applied Mathematics, 62 (2009), no. 7, 920–968.
- 42 J. Colliander, S. Ibrahim, M. Majdoub, N. Masmoudi, *Energy Critical NLS in two space dimensions*, J.H.D.E. 6 (2009), no. 3, 549–575.
- 43 J. Colliander, P. Raphaël, *Rough blowup solutions to the L^2 critical NLS*, Mathematische Annalen, 345 (2009), no. 2, 307–366.
- 44 J. Colliander, T. Roy, *Bootstrapped Morawetz Estimates and Resonant Decomposition for Low Regularity Global Solutions of Cubic NLS on \mathbb{R}^2* , to appear Comm. Pure Appl. Anal., 14 pages, 2010.
<http://arxiv.org/abs/0811.1803>

- 45 J. Colliander, M. Grillakis, N. Tzirakis, *Remarks on Global A Priori Estimates for the Nonlinear Schrödinger Equation*, to appear Proceedings A.M.S., 2010.
<http://arxiv.org/abs/0908.0644>
 - 46 J. Colliander, G. Simpson, C. Sulem, *Numerical Simulations of the Energy-Supercritical Nonlinear Schrödinger Equation*, to appear in J.H.D.E., 17 pages, 2010.
<http://arxiv.org/abs/0907.3130>
 - 47 J. Colliander, M. Keel, G. Staffilani, H. Takaoka, T. Tao, *Transfer of Energy to High Frequencies in the Cubic Defocusing Nonlinear Schrödinger Equation*, to appear *Inventiones Mathematicae*, 54 pages, 2010.
<http://arxiv.org/abs/0808.1742>
2. Books
 - 1 L. A. Rubel with J. Colliander, *Entire and Meromorphic Functions*, Springer-Verlag, 1996.
3. Manuscripts/Preprints
 - 1 M. Christ, J. Colliander, T. Tao, *Instability of the periodic nonlinear Schrödinger equation*, preprint, 2003.
<http://arxiv.org/abs/math/0311227>
4. Invited Lectures

- 11/09 Analysis Seminar, Kyoto University
- 11/09 RIMS Workshop, Hokkaido University, Sapporo
- 8/09 2 Lecture mini-course, PIMS, Vancouver
- 6/09 Nonlinear PDE and Free Boundary Problems, Warwick University
- 5/09 New Connections between Dynamical Systems and Hamiltonian PDEs, Maiori
- 5/09 5 Lecture mini-course, University of Naples Federico II, Naples
- 5/09 Colloquium, Institut Henri Poincaré, Paris
- 2/09 Colloquium, University of Maryland
- 1/09 Carolina Meeting on Harmonic Analysis and PDEs, University of North Carolina
- 6/08 Second Canada-France Congress, Montreal
- 4/08 Harmonic Analysis and PDE Seminar, University of Illinois, Urbana
- 3/08 Colloquium, Indiana University
- 2/08 Harmonic Analysis Workshop, Fields Institute
- 1/08 PDE Seminar, Kyoto University
- 1/08 Kyoto Conference on Dispersive Waves
- 12/07 Analysis Seminar, Warwick University
- 10/07 6 Lecture mini-course, Paris-Nord, Villetaneuse
- 9/07 Nonlinear Waves and Dispersive Equations, Oberwolfach
- 5/07 Videoseminar between Paris-Nord; Berkeley; Bonn, Paris-Nord
- 5/07 Séminaire EDP, Paris-Sud, Orsay
- 12/06 Harmonic Analysis Session, CMS, Toronto
- 11/06 ADVANCE Distinguished Lecture, Kansas State University
- 11/06 Analysis Seminar, Kansas State University
- 10/06 Analysis Seminar, University of Rochester
- 7/06 PDE Session Speaker, ICMP, Rio de Janeiro
- 5/06 Lecture Series, Institute for Applied Physics and Computational Mathematics, Beijing
- 3/06 PDE Seminar, Georgia Tech
- 2/06 Analysis Seminar, M.I.T.
- 12/05 Midwest PDE Seminar, Notre Dame University
- 12/05 Geometric and Analytical Aspects of Nonlinear Dispersive Equations, MSRI
- 11/05 Harmonic Analysis and PDE, AMS Sectional, University of Oregon
- 10/05 Prairie Analysis Seminar, Kansas State University
- 7/05 Harmonic Analysis and Partial Differential Equations, Oberwolfach
- 4/05 55th Midwest PDE Seminar, Purdue University
- 3/05 PDE Seminar, McMaster University
- 2/05 Colloquium, Northwestern University
- 12/04 Harmonic Analysis Session, CMS, Montreal
- 11/04 Multiscale Geometric Analysis V, IPAM
- 11/04 Colloquium, Brown University
- 10/04 Nonlinear Dispersive Equations, Oberwolfach
- 5/04 Short Course on Hamiltonian PDEs, Fields Institute
- 2/04 Real and Complex Analysis Seminar, Ohio State University
- 1/04 PDE Seminar, Fields Institute

- 12/03 Analysis Seminar, Princeton University
- 12/03 Analysis and PDE Seminar, Institute for Advanced Study
- 11/03 Analysis Seminar, University of Pennsylvania
- 11/03 Analysis Seminar, City University of New York
- 11/03 Analysis and PDE Seminar, Institute for Advanced Study
- 10/03 Analysis Seminar, University of Illinois, Urbana
- 3/03 Applied Math Seminar, York University, Toronto
- 2/03 Analysis Seminar, Courant Institute, New York University
- 2/03 Analysis Seminar, Princeton University
- 2/03 Working group on nonlinear evolutions, Fields Institute
- 1/03 Analysis Seminar, University of California, Davis
- 11/02 Analysis and PDE Seminar, M.I.T.
- 11/02 Applied Analysis Seminar, University of Massachusetts, Amherst
- 5/02 Analysis Seminar, Stanford University
- 4/02 Curvature and Dispersion Effects in Nonlinear PDE, Oberwolfach
- 1/02 PDE Seminar, McMaster University, Hamilton
- 12/01 Special Session on Nonlinear and Geometric Analysis, CMS Winter, Toronto
- 11/01 Mathematics Colloquium, University of Toronto
- 4/01 Analysis Seminar, Princeton University
- 2/01 Mathematics Colloquium, McMaster University, Hamilton
- 2/01 Mathematics Colloquium, Northwestern University, Evanston
- 1/01 Mathematics Colloquium, University of Michigan, Ann Arbor
- 1/01 Analysis Seminar, University of California, Davis
- 1/01 Mathematics Colloquium, University of California, Davis
- 1/01 Mathematics Colloquium, University of Oregon, Eugene
- 1/01 Mathematics Colloquium, University of California, Irvine
- 1/01 Mathematics Colloquium, University of Southern California
- 1/01 Mathematics Colloquium, University of Toronto
- 1/01 Mathematics Colloquium, University of California, Santa Cruz
- 10/00 Analysis Seminar, University of California, Davis
- 10/00 Special Session on Harmonic Analysis, AMS Sectional, San Francisco State
- 10/00 Special Session on Nonlinear Evolution Equations, AMS Sectional, San Francisco State
- 9/00 Analysis and PDE Seminar, Berkeley
- 4/00 Analysis Seminar, Princeton University
- 3/00 Memphis Lectures on Mathematics, University of Memphis
- 3/00 Applied Mathematics Seminar, Lawrence Berkeley National Laboratory, Berkeley
- 12/99 Colloquium, Stanford University, Palo Alto
- 10/99 Special Session on Harmonic Analysis and PDE, AMS Sectional, University of Texas
- 6/99 Colloquium, Université de Cergy-Pointoise, Cergy, France
- 6/99 Séminaire EDP, Orsay, France
- 6/99 Séminaire d'Analyse, Paris-Nord, France
- 5/99 Applied Mathematics Seminar, Lawrence Berkeley National Laboratory, Berkeley
- 5/99 Analysis and PDE Seminar, Berkeley
- 12/98 Calderon-Zygmund Seminar, University of Chicago
- 10/98 Analysis Seminar, Berkeley
- 9/98 Analysis and PDE Seminar, Berkeley
- 6/98 PDE Seminar, Purdue University, West Lafayette
- 4/98 Real Analysis [Gene Fabes 1937–1997], University of Minnesota, Minneapolis
- 4/98 Mathematics Seminar, Macalester College, St. Paul
- 4/98 Analysis Seminar, University of Illinois, Chicago
- 2/98 Calderon-Zygmund Seminar, University of Chicago

- 12 /97 Center for Dynamical Systems and Nonlinear Studies Seminar, Georgia Tech.
- 10/97 Partial Differential Equations Seminar, Berkeley
- 10/97 Analysis Seminar, University of Texas
- 10/97 TICAM Seminar, University of Texas
- 8/97 Harmonic Analysis Seminar, Mathematical Sciences Research Institute, Berkeley
- 7/97 Nonlinear Dispersive Waves, Anogia Academic Village, Crete
- 2/97 Number Theory Seminar, University of Illinois, Urbana
- 1/97 PDE/Geometric Analysis Seminar, Johns Hopkins University
- 9/96 Analysis Seminar, University of Illinois, Urbana
- 8/96 Reele Analysis, Oberwolfach
- 3/96 Applied Math Seminar, Institute for Advanced Study
- 10/95 Analysis Seminar, University of Illinois, Urbana
- 7/95 Research Seminar, Park City Mathematics Institute
- 10/94 KdV Seminar, University of Illinois, Urbana
- 4/94 Analysis Seminar, University of Illinois, Urbana

E. List of Courses

1. Undergraduate courses

Smr/10	Reading Course for 12 Students	Analysis and PDE
W/10	MAT195	Calculus for Engineering Sciences
F/09	MAT194	Calculus for Engineering Sciences
W/09	Reading Course for five students	Classical Field Theory
W/09	MAT195	Calculus for Engineering Sciences
F/08	MAT194	Calculus for Engineering Sciences
F/08	APM421	Quantum Mechanics
F/08	Reading Course for Faiyaz Hasan	Quantum Optics
W/07	MAT195HS	Calculus for Engineering Sciences
S/06	Reading Course for Geordie Richards	Nonlinear Schrödinger Equations
F/06	APM346H1	Partial Differential Equations
W/06	MAT195HS	Calculus for Engineering Sciences
F/02	Reading Course for Paul Lee	Hamiltonian Dynamics
AY/02-03	MAT137	Calculus!
AY/01-02	APM351	Partial Differential Equations

2. Graduate courses

W/10	MAT1061HS	Graduate PDE2
W/07	MAT1061HS	Graduate PDE2
W/06	MAT1638HS	Fluid Dynamics
W/05	MAT1508	Nonlinear Schrödinger Equations
W/03	APM426	Introduction to General Relativity
W/02	APM426	Introduction to General Relativity

3. Other teaching and lectures given

8/09	PIMS Lecture Series	Low Regularity NLS Evolution
5/09	Naples Lecture Series	Maximal-in-time issues for NLS
10/07	Paris 13 Lecture Series	Maximal-in-time issues for NLS
S/06	Summer Lecture Series	On Critical NLS
5/06	Beijing Lecture Series	Recent Progress on NLS
S/02	Summer Lecture Series	Nonlinear Dispersive PDE: Stability, Scattering
11-12/02	Fields Working Group	Well-posedness for quasilinear parabolic PDE
7/01	IST Summer School, Lisbon	Almost Conservation Laws

F. Administrative Positions

1. Positions internal to University

Associate Chair	Research	Department of Mathematics
Coorganizer	Analysis, PDE, Applied Math Seminar	Department of Mathematics
Chair	09-10 Computer Committee	Department of Mathematics
Member	09-10 Planning Committee	Department of Mathematics
Member	09-10 Faculty Appointments Committee	Department of Mathematics
Member	3/10 M. Zoghi Ph.D Committee	Department of Mathematics
Chair	08-09 Computer Committee	Department of Mathematics
Member	4/08 J. Mesaric Ph.D Committee	Department of Mathematics
Member	4/08 P. Lee Ph.D Committee	Department of Mathematics
Chair	5/08 R. Grunwald Ph.D. Defense Committee	Department of Chemistry
Member	06-07 Faculty Appointments Committee	Department of Mathematics
Member	06-07 Jackson Chan Ph.D. Committee	Department of Mathematics
Member	06-07 Gang Zhou Ph.D. Committee	Department of Mathematics
Coorganizer	04-05 Applied Mathematics Seminar	Department of Mathematics
Member	04-05 Faculty Appointments Committee	Department of Mathematics
Member	04-05 Computer Committee	Department of Mathematics
Member	3/03 Wolfgang Staubach Ph.D. Committee	Department of Mathematics
Member	02-03 Faculty Appointments Committee	Department of Mathematics
Member	02-03 Computer Committee	Department of Mathematics
Member	02-03 Colloquium Committee	Department of Mathematics
Coorganizer	02-03 Applied Mathematics Seminar	Department of Mathematics
Member	01-02 Faculty Appointments Committee	Department of Mathematics
Member	01-02 Computer Committee	Department of Mathematics
Member	9/01 James Coleman Ph.D. Committee	Department of Mathematics

2. Positions external to University

Member	6/10 Computing Advisory Committee	Fields Institute
Referee	3/10 Ph.D Thesis of F. Catoire	Orsay
Reviewer	12/09 ASI Proposal, Croucher Foundation	Hong Kong
Reviewer	12/09 CFI, Foundation Quebecois	Montreal
Reviewer	12/09 Portuguese National Science Foundation	Libon
Member	10-12 Research Committee	CMS
Chair	4/09 CMS Doctoral Prize Committee	CMS
Coorganizer	09-10 Fields Analysis Working Group	Fields Institute
Coorganizer	8/09 Nonlinear Wave Equations in Engineering	BIRS
Coorganizer	8/09 Dispersive & Geometric Evolution Problems	PIMS
Lecturer	5/09 Advanced Level Summer School	Napoli
Member	4/09 CMS Doctoral Prize Committee	CMS
Review	1/09 CFI, Foundation Quebecois	Montreal
Coorganizer	9/08 C. Morawetz Birthday Conference	Fields Institute
Coorganizer	08-09 Fields Analysis Working Group	Fields Institute
Editor	09- Journal of Hyperbolic Differential Equations	
Editor	08- Discrete and Continuous Dynamical Systems	
Member	4/08 CMS Doctoral Prize Committee	CMS
Panelist	1/08 Grants Review Committee	NSF
Referee	11/07 Habilitation of S. Keraani	U. Rennes
Referee	11/07 Ph.D Thesis of L. Thomann	Orsay
Editor	06-11 Canadian Journal of Mathematics	CMS
Editor	06- Atlantic Electronic Journal of Mathematics	
Coorganizer	06-07 Fields Applied Mathematics Colloquium	Fields Institute
Coorganizer	06-07 Fields Analysis Working Group	Fields Institute
Coorganizer	12/06 Special Session on NLS	CMS, Toronto
Coorganizer	4/06 Schrödinger Evolution Equations	BIRS
Coorganizer	8/05 Nonlinear Dispersive Equations	MSRI
External Examiner	4/04 N. Tzirakis Thesis	U. Mass.
Coorganizer	W/04 Soliton Working Group	Fields Institute
Coorganizer	3/04 Workshop on Nonlinear Waves	Fields Institute
Member	10/03 Graduate Program Review Committee	U. Illinois
Coorganizer	02-03 Applied Mathematics Colloq.	Fields Institute
Coorganizer	02-03 Mathematics Outside Mathematics Colloq.	Fields Institute
Coorganizer	S/03 Fields Working Group	Fields Institute
Coorganizer	2/00 Workshop on Nonlinear Dispersive Eqs.	Stanford U.