

CURRICULUM VITAE

Yang Wang

PERSONAL DATA:

Home Address: HKUST, Tower 17 Flat 2B, Clear Water Bay, Kowloon, Hong Kong.
Work Address: Department of Mathematics, HKUST, Clear Water Bay, Kowloon, Hong Kong.
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Citizenship: U.S. Citizen

EDUCATION:

B.S.	1983	University of Science and Technology of China	Mathematics
M.S.	1988	Harvard University	Mathematics
Ph.D.	1990	Harvard University	Mathematics

Ph.D. Supervisor: David Mumford

CURRENT EMPLOYER:

Hong Kong University of Science and Technology (HKUST)

ADMINISTRATIVE EXPERIENCE:

Department Head, Mathematics, HKUST 2014-Present

Duties and Accomplishments include:

- Be the final decision maker on all aspects of departmental affairs. Be the representative of the department within and outside the university.
- Making external and internal engagement a top priority for the department to boost the department's international visibility and to create a more vibrant work environment. Several programs such as short and long-term research visitor program has been created to provide incentive for inviting and hosting visitors. Funds have been allocated for organizing conferences and workshops. I have established a weekly departmental Wine-Cheese-Tea event to promote collegiality and interactions among all levels within the department. This has significantly boosted the morale of the department.
- Developed a comprehensive set of guidelines for faculty **Annual Merit Review**. This had been a very big concern of the faculty members. The new criteria provide very concrete guidance to faculty on what have been expected from them. In particular, there is a significant emphasis on engagement activities. The guidelines lead to far more transparency. The new guidelines were viewed as a model for conducting future annual merit reviews, and were circulated university wide.
- Initiated **Project Renaissance**, which has turned the public spaces of the department into a gallery of mathematical history and art. The hope is again to make the department a better place to work for. This project has completed two phases, and the department is now viewed as a model environment by many. Several other units have already talked about doing the same thing.

- Have spent an enormous amount of time engaging faculty members with the goal of changing the departmental culture to be more proactive, more upbeat, and more transparent. It is working. Even the staff members now have much higher morale because they have been asked to contribute ideas. There is a much stronger feeling of ownership within the department at all levels.
- Overhaul the support staff administrative structure with a novel restructuring that has significantly improved the working environment for the support staff. This has translated into higher productivity and a much happier workplace. While this may not sound much, it was actually one of the hardest things I have achieved at HKUST.
- Is one of the three key members (Qiang Yang and Lei Chen) for the establishment of the **HKUST Big Data Institute**. Serving as its Associate Director.
- Co-created with CSE a joint **CSE-Math MSc program on Big Data Technology**, the first educational program specifically in data science in HKUST.
- Actively involved in fund raising whenever I sense an opportunity. I made the connection and followed through with Raymond Chu, who eventually donated over US\$1 million to help establishing the **Big Data for Bio Intelligence (BDBI) Lab** at HKUST.
- Established the **S. S. Chern Class**, an elite Undergraduate program in Mathematics aimed to recruit top students in mathematics, and provide them with a more in-depth and personal educational experience in mathematics. I'm serving also as the Director of the Chern Class.
- Established a substantive and comprehensive collaborative program between HKUST and **Institute of Computational and Experimental Mathematical Research (ICERM**, which is an NSF funded institute at Brown University). The program includes HKUST-ICERM Visiting Professor Fellowship, Virtual Institute in Mathematical and Statistical Science (VI-MSS), Summer Undergraduate Research Program. It is already running. The program should elevate the visibility of HKUST Math, and provides a truly substantive venue of collaboration with researchers in the U.S. for our faculty.
- Developed a substantive joint program with Computational Science Research Center (CSRC), an elite research center in computational science in Beijing, that allows HKUST to hire two-year postdocs for joint supervision, and paid for by CSRC. It also allows HKUST faculty access to their super computer.
- Established a partnership with Seoul National University (SNU) to co-host an annual **Undergraduate Summer Research Camp** (also in collaboration with ICERM). The goal is to strengthen HKUST's visibility and presence in Korea and promote more collaborations with other Asian countries. The first camp will be held in HKUST in 2017.
- Initiated and led the **negotiation with Clear Water Bay School (CWBS) and English School Foundation (ESF)** on an agreement to give new faculty of HKUST priority in placing their children into ESF international schools, including CWBS. This would have *enormous* benefit for HKUST in the recruitment of new faculty. The agreement is in place, and will be voted on by the ESF Board in May, 2016.
- As part of a realistic plan to improve the quality of PG recruits, I have developed partnerships with several top universities in China to gain preferential access to their best undergraduate

students. These universities include: Wuhan University, Jilin University, Hunan University, Beihang University, Sichuan University, Sun Yat-sun University. More to come.

- Proactively seeking industrial partners for the Research in Industrial Projects (RIPS-HK) program, a joint program between IPAM in UCLA and HKUST. So far I have secured the support from CIC, Huawei, Ant Financial, several companies in robotics such as Googol, Desay.

Department Head, Mathematics, Michigan State University

2007-2014

Duties and Accomplishments include:

- Be the final decision maker on all aspects of departmental affairs. Be the representative of the department within and outside the university.
- Successfully managed the worst financial crisis of the university, during which the departmental budget was cut by more than 13%. Developed a number of sustainable budget drivers that will shield the department from a future budget crisis.
- Established the first-ever departmental regular postdoc program, with annual offers to 4-8 postdocs.
- Instituted an across the board teaching load reduction for PhD students, from 2-1 teaching load to 1-1.
- Created the Advanced Track B.S. program in mathematics, which has a higher degree of rigor and aims to recruit top students into mathematics.
- Created the B.S. degree program in Actuarial Science.
- Set a high standard for excellence in research and education, leading to the hiring of a number of exceptional new faculty members.
- Instituted a number of new teaching models that combine traditional teaching with online tools such as WebWork and others. Developed a substantive semester long mentoring program for TAs and postdocs.
- Greatly expanded the Math Learning Center (MLC) with the renovation of main site and the establishment of 4 new MLC Neighborhood Centers.
- Presided over a complete reorganization of the staff, with a revamped personnel and a new expectation that every staff will learn to cover the duties of others.
- Established several substantive undergraduate exchange programs with universities in China, from which resources for the department are generated. A centerpiece of these programs is our novel Discovering America program.
- Established the dual degree “2+2” program in Actuarial Science between MSU and Guangzhou University (currently pending approval on minor revisions), and made initial dialogue with other universities in China for establishing similar “2+2” programs.

Program Director, Division of Mathematical Sciences, NSF

2006-2007

- Duties include evaluation and handling out research awards, community outreach.

Associate Chair, Mathematics, Georgia Institute of Technology 2003-2006

- Duties include helping the Chair with administrative matters; representing the department in the absence of the Chair.

Undergraduate Director, Mathematics, Georgia Institute of Technology 2003-2006

- Leading and managing all aspects of the undergraduate program.
- Created the *Research Option* for the degree program.
- A main founder of the *Georgia Tech High School Math Competition*. Raised all the funds needed to support the event.
- Instituted a comprehensive recruiting network that greatly increase the number of math majors.

ALL PROFESSIONAL EXPERIENCE:

Associate Director, The Big Data Institute, HKUST	2015-present
Department Head, Mathematics, HKUST	2014-present
Department Chair, Mathematics, Michigan State University	2007-2014
Professor, Mathematics, Michigan State University	2007-2014
Program Director, Division of Mathematical Sciences, NSF	2006-2007
Associate Chair, Mathematics, Georgia Institute of Technology	2003-2006
Undergraduate Director, Mathematics, Georgia Institute of Technology	2003-2006
Professor, Georgia Institute of Technology	2000-2007
Adjunct Professor, The Logistics Institute, Georgia Institute of Technology	2001-2007
Visiting Professor, University of Maryland, College Park	Spring 2002
Associate Professor, Georgia Institute of Technology	1995-2000
Visiting Associate Professor, National University of Singapore	Jan-August 2000
Consultant, AT&T Research Labs	December 1999
Visiting Associate Professor, National University of Singapore	June 1999
Visiting Associate Professor, Cornell University	Jan-July 1997
Assistant Professor, Georgia Institute of Technology	1989-1995
Consultant, AT&T Bell Laboratories	December 1993
Consultant, AT&T Bell Laboratories	April 1993

CURRENT FIELDS OF RESEARCH INTEREST:

Wavelets and analysis, tiling, fractal geometry, digital signal processing, analog to digital conversion, supply chain management.

HONORS AND AWARDS:

Nominated for the “Teaching Excellence Award”, Georgia Institute of Technology, 1990.

Named “Professor of the Month” for October 1993 by $\Lambda\Sigma$, a sophomore honor society.

Nominated for the “W. Roane Beard Outstanding Teacher Award”, Georgia Institute of Technology, 1994.

Nominated for the “Best Paper Award”, Georgia Institute of Technology, 1996.

Nominated for the “W. Roane Beard Outstanding Teacher Award”, Georgia Institute of Technology, 1999.

Pi Mu Epsilon Recognition Award for “Outstanding Contribution to the Georgia Tech High School Math Competition”, 2004.

GRANTS:

NSF grant 24-6-R7616-OAO, (co-PI; M. Berger PI), 1992–1994.

NSF grant DMS-9307601, 1993–1996.

NSF grant DMS-953004, (Conference grant, co-PI, with Barnsley (PI) and Geronimo), 1995.

NSF grant DMS-9706793 (PI), 1997-1999.

NSF grant DMS-00-70586 (PI), 2000-2002.

NSF Focus Research Groups grant DMS-0139261 (co-PI, J. Benedetto PI), 2002-2004.

NSF Focus Research Groups grant DMS-0456538 (co-PI, M. Lacey PI, withdraw from it after going to NSF), 2005-2007.

NSF grant DMS-0813750 (PI), 2008-2010.

NSF grant DMS-08135022 (PI, co-PI G.W. Wei), Conference grant 2008-2009.

NSF grant DMS-0936830 (co-PI, G.W. Wei PI), 2009-2011.

NSF grant DMS-1043034 (PI, collaborative with Haomin Zhou at Georgia Tech and Peijun Li at Purdue), 2010-2013.

AFOSR grant FA9550-12-1-0455 (co-PI, Ben Ong PI), 2012-2015.

NSF grant IIS-1302285 (co-PI, Guowei Wei PI), 2013-2016.

HK RGC grant 16306415 (PI), 2015-2018.

OTHER GRANTS:

Grant to establish CZ-IMRE computations Lab, The National University of Singapore, co-PI (Yingfei Yi PI), about \$200,000 a year, plus a one time infrastructure funding at about \$500,000.

Hong Kong Science Foundation grant, HK\$400,000 (co-PI; Ka-Sing Lau PI), 2001-2002

Technology Fee Grant to establish a wireless mobile computing laboratory, co-PI (with Shui-Nee Chow, Lew Lefton and Peter Mucha)

EDITORIAL BOARD:

Journal of Fourier Analysis and Applications (Associate Editor)

Journal of Fractal Geometry (Associate Editor)

Advances in Computational Mathematics (Associate Editor)

Applied and Numerical Harmonic Analysis Book Series by Birkhauser (Advisory Board)

OTHER EXPERIENCES:

1992–1993 *Freelance joke writer* for Jay Leno’s Tonight Show.
1992–1993 *Board member* of the Association of Chinese Professionals
1986–1989 *Resident tutor* of Dudley House, Harvard University.
1986–1987 *Mathematics tutor*, Harvard hockey team.

SERVICES — HONG KONG UNIV OF SCIENCE AND TECHNOLOGY:

Board of Governors of Institute of Mathematics and Applications, 2014-2018.

Panel Member for the Hong Kong Research Assessment Exercise (RAE), August 2014.

Co-Chair (with Qiang Yang), the *HKUST 25th anniversary Cluster Hiring – Data Science Hiring Committee* (2014-).

Member, Search Committee for the Director of the HKUST Institute for Advanced Study (2015-2016, Ping Sheng Chair).

One of the two Core Working Group members (with Kar-Yan Tam) from HKUST for the 2016 International Mathematics Olympiad, to be held on the campus of HKUST in July 2016.

Member, HKUST Multi-Purpose Theater design committee (2015).

Representing School of Science on the HKUST delegation to Mexico with President Tony Chan, November 2014.

Representing School of Science on the HKUST delegation to Central Europe with President Tony Chan, May 2015.

Representing School of Science as a HKUST 25th Anniversary Celebration Speaker, November 2015, London.

Organizer (Bingyi Jing main organizer), IAS Workshop in Data Science, HKUST IAS, January 2016, Hong Kong.

Main organizer, Workshop on Fractal Geometry and Related Topics, HKUST IAS, March 2016, Hong Kong.

External member of the Distinguished Professor Appointment Committee, University of Macau, 2015-16.

Advisory and Academic Board Member and Grand Jury Panel member, 2nd Annual International Mathematical Modeling Challenge (IMMC 2016), held March-May 2016 in Hong Kong.

SERVICES — MICHIGAN STATE UNIVERSITY:

A main organizer for the *First Midwest Conference on Mathematical Techniques for Imaging and Surfaces*, April 2009.

Lead organizer for the Banff International Research Station Workshop *Mathematics: Muse, Maker and Measure of Arts*, December 2011.

Organizer, special session on fractals and tiling, AMS conference in Georgia Southern University, March 12-13, 2011.

A main organizer for the *Second Midwest Conference on Mathematical Techniques for Imaging and Surfaces*, August 2011.

Co-Chair, search committee for the Director of Institute of Research in Mathematics and Science Education (IRMSE) at Michigan State, 2011.

Main organizer for the *Third Midwest Conference on Mathematical Techniques for Imaging and Surfaces*, June 2012.

Organizer for the *International Conference on Brain-Mind*, July 2012.

External Review Committee, Ohio State University mathematics department, May 2013.

External Review Committee, University of Delaware mathematics department, October 2013.

Elected to Board of Governors of Institute of Mathematics and Applications, 2014-2018.

External Panel Member for the Hong Kong Research Assessment Exercise (RAE), 2013-2014. (This is perhaps the most important evaluation event for higher education institutions in HK, as it impacts funding for each university. It is held once every 7 years. I was re-designated as a "Local Panel Member" after I moved to HKUST.)

Lead local Organizer, AMS Central Sectional Meeting, March 13-15, 2015, Michigan State University, East Lansing, MI 48824.

SERVICES — GEORGIA INSTITUTE OF TECHNOLOGY:

Teach *Problem Solving* course (1-2 credit hours) each fall on my own time.

Main organizer for the annual *Georgia Tech High School Math Competition*.

Organizing a special session *Fractals and Tilings* at the *21st Summer Conference on Topology and its Applications* at Georgia Southern State University, July 6-9, 2006.

Organized a minisymposium on *Image Processing and Computer Vision* at the University of Georgia Conference celebrating Charles Chui's 60th birthday, May 2005.

Organized *Time Frequency Analysis and Applications* Workshop, Oct. 12-14, Atlanta, 2003.

Serving as the coordinator and coach for the Putnam Mathematical Competition since 1994.

Organized the *Satellite Conference of the ICM on Fractal Geometry and Applications*, held August 30 – September 2, 2002, in Nanjing, China.

Organized *Wavelet* session and *Harmonic Analysis* session of the AMS meeting, held in Atlanta, Mar 8-10, 2002.

Organized *International Workshop on Fractals and Wavelets*, held in Singapore, May 2000.

Organized *Image Processing, Multiresolution Analysis and Statistics* Conference, held in Atlanta, September 1999.

Organized the wavelet session in the SIAM Conference, held in Atlanta in May, 1999.

Organized the wavelet session for the 1998 International Conference on Approximation Theory (Nashville, January 1998)

Served as the “ambassador” for the Southeast Applied Analysis Center, Atlanta September – December, 1997.

Established the Georgia Tech Mathematics Club in October, 1997. Serving as the faculty advisor of the club.

Served on the master’s degree committees of numerous students from 1989 to present.

Served on the Ph.D. committees for numerous students.

COMMITTEES – MICHIGAN STATE UNIVERSITY:

As department head I have served on many committees and task forces at the institution level, and am ex-officio member of various departmental committees.

COMMITTEES – GEORGIA INSTITUTE OF TECHNOLOGY:

1991–1992	Chairman, <i>Policy Committee</i>
1992–1993	Chairman, <i>Policy Committee</i>
1993	<i>Calculus Textbook Committee</i>
1993–1994	<i>Colloquium Committee</i>
1993–1994	<i>Comprehensive Committee</i>
1994–1995	<i>Comprehensive Committee</i>
1994–1995	<i>Hiring Committee</i> (for half year)
1995–1996	<i>Hiring Committee</i>
1995–1996	<i>Organizing Committee for ImageTech96</i>
1996–1997	<i>Undergraduate Committee</i>
1996–1997	<i>Organizing Committee for ImageTech97</i>
1997–1998	<i>Faculty Advisory Committee</i>
1997–1998	<i>Executive Committee</i>
1998–1999	<i>Faculty Advisory Committee</i>
1998–1999	<i>Executive Committee</i>
1998–1999	<i>Junior P&T Committee</i>
1999–2000	<i>Junior P&T Committee</i>
1999–2000	<i>Undergraduate Committee</i>
1999–2000	<i>Election and Nomination Committee</i>
2000–2001	<i>Senior P&T Committee</i>
2000–2001	<i>Undergraduate Committee</i>
2001–2002	<i>Senior P&T Committee</i>
2003–2004	<i>Faculty Advisory Committee</i> (resigned after becoming associate chair)
2003–2006	<i>Associate Chair and Undergraduate Program Director</i>
since 1989	served on many subcommittees for meritorious evaluations

PhD THESIS ADVISEES:

Eugeni Belogay, David Jimenez, Hao Deng (co-advised with Haomin Zhou), David Lawlor (co-advised with Andrew Christlieb), Xun Wang (co-advised with Zhengfang Zhou), Xianfeng Hu, graduated.

Bosu Choi (with Andrew Christlieb), Lizhang Miao, Yi Rong, Eric Yau, current.

POSTDOCS MENTORED:

De-Jun Feng, Sze-Man Ngai, Sergey Borodachov, Qiang Wu, Dong Mao, Siyang Yang, Antonio Cicone, Louis Yang Liu, Aditya Viswanathan (current, MSU), Wei-Hsun Yu (current, MSU), Haixia Liu (current)

UNDERGRADUATES MENTORED:

I have mentored many undergraduate students. The following are my undergraduate mentees since 2013:

Erik Bates (Goldwater Scholar, MSU), Yi Rong and Xiuyu Ma (Zhejiang university, visiting MSU in 2012-13), Kai Zhang (Xian Jiaotong University, visiting MSU 2013), Michael Horst (Arizona State University), Guanshuo Liu (Beihang University, visiting MSU 2013), Wuxian He (2015-16).

RESEARCH PREPRINTS:

1. Generalized phase retrieval : the measurement number, matrices recovery and beyond, preprint (with Zhiqiang Xu).
2. Subspace clustering by (k, k) -sparse matrix factorization, preprint (Authorship order: Haixia Liu, Jianfeng Cai and Yang Wang).
3. Phase retrieval from the magnitude of affine linear measurements, preprints (with Bing Gao, Qiyu Sun and Zhiqiang Xu).
4. Almost everywhere generalized phase retrieval, preprint (with Zhiqiang Xu).
5. Topological invariants and Lipschitz equivalence of fractal squares, preprint (with Huojun Ruan).
6. Detection of edges from two-dimensional Fourier data using Gaussian mollifiers, preprint (with Doug Cochran, Anne Gelb, Guohui Song and Aditya Viswanathan)
7. The partial differential equation transform – a robust method for signal, image and data analysis, preprint (with G. Wei and S. Yang)
8. Differential geometry and topological invariant approaches to biomolecular structure and dynamics, submitted to *Discrete and Continuous Dynamical Systems, B* (with X. Feng, Q. Zheng, S. Yang, Y.Y. Tong, M. Zhou, and G. W. Wei).
9. The three-hat problem, preprint (with Brian Benson)
10. Multiscale total variation and multiscale anisotropic diffusion algorithms for image denoising, preprint (with T. Chan and H. Zhou).
11. Multiscale total variation method for denoising natural color photos in digital photography, preprint (with Haomin Zhou).
12. Tiling by four squares, preprint (with Dejun Feng).

REFEREED RESEARCH PUBLICATIONS:

13. Random matrices and erasure-robust frames, to appear in *J. Fourier Analysis and Applications*.
14. Non-Spectral fractal measures with Fourier frames, to appear in *Journal of Fractal Geometry* (with Chun-Kit Lai).
15. Fast phase retrieval for high-dimensions, to appear in *SIAM Journal of Imaging Science* (with M. Iwen and A. Viswanathan).
16. The stable recovery of phase retrieval problem, to appear in *J. Fourier Analysis and Applications* (with Bing Gao and Zhiqiang Xu).
17. Robust sparse phase retrieval made easy, to appear in *Applied and Computational Harmonic Analysis* (with M. Iwen and A. Viswanathan).
18. On the decay of the smallest singular value of submatrices of rectangular matrices, *Asian-European Journal of Mathematics* 2 Vol. 9 (2016), No. 3 1650075 (with Yang Liu).
19. A multiscale sub-linear time Fourier algorithm for noisy data, *Applied and Computational Harmonic Analysis* Volume 40 (2016), Issue 3, 553574 (with A. Christlieb and D. Lawlor).
20. A new approach for analyzing physiological time series, *Advances in Adaptive Data Analysis* Vol. 07 (2016), Issue No. 01n02 (with D. Mao and Q. Wu).
21. Self-similar subsets of the Cantor Set, *Advances in Mathematics*, Volume 281 (2015), 857885 (with Dejun Feng and Hui Rao)
22. Gabor orthonormal bases generated by the unit cubes, *Journal of Functional Analysis* Vol. 269 (5) (2015), 1515-1538 (with J. P. Gabardo and Chun-Kit Lai).
23. Invertibility and robustness of phaseless reconstruction, *Applied and Computational Harmonic Analysis* 38, no 3 (2015), 469–488 (with R. Balan).
24. Multiple authors detection: a quantitative analysis of Dream of the Red Chamber, *Advances in Adaptive Data Analysis* 6 (2014), number 04 (with X. Hu and Q. Wu).
25. Lipschitz equivalence of self-similar sets with touching structures, *Nonlinearity* 27 (2014) 1299-1321 (with Huojun Ruan and Lifeng Xi).
26. Phase retrieval for sparse signals, *Applied and Computational Harmonic Analysis* Vol 37 no. 3 (2014), 531-544 (with Zhiqiang Xu).
27. Phase retrieval from very few measurements, *Linear Algebra and Appl.* Vol 449 (2014), 475–499 (with M. Fickus, D. Mixon, and A. Nelson).
28. Bayesian learning of sparse multiscale image representations, *IEEE Transactions of Signal Processing* Vol 22 No 12 (2013), 4972 - 4983 (with J. Hughes and D. Rockmore).
29. Necessary and sufficient conditions to perform Spectral Tetris, *Linear Algebra and Its Applications*, Volume 438, No. 5 (2013), 2239-2255 (with P.G. Casazza, A. Heinecke, K. Kornelson, Z. Zhou).
30. Phase aliasing correction for robust blind source separation using DUET, *Applied and Computational Harmonic Analysis* Vol 35 No 2 (2013), 341–349 (with Ozgur Yilmaz and Zhengfang Zhou).

31. Regularity of refinable functions, *Applied and Computational Harmonic Analysis*, Volume 34 No. 1 (2013), 142-147 (with Zhiqiang Xu).
32. Edge detection from truncated Fourier data using spectral mollifiers, *Adv. in Computational Math.*, Volume 38 No. 4 (2013), 737–762 (with Doug Cochran and Anne Gelb).
33. Source extraction in audio via background learning, *Inverse Problems and Imaging* Volume 7, No. 1 (2013), 283–290 (with Zhengfang Zhou).
34. Adaptive sub-linear time Fourier algorithms, *Advances in Adaptive Data Analysis*, Volume 5 No. 1 (2013), 25 pages (with A. Christlieb and D. Lawlor).
35. Vakman’s problem and the extension of Hilbert transform, *Applied and Computational Harmonic Analysis* 34, number 2 (2013), 308–316 (with Jianfeng Huang and Lihua Yang).
36. On the convergence of iterative filtering empirical mode decomposition, in *Excursions in Harmonic Analysis Volume 2*, edited by T. D. Andrews et al, 157–172, Springer (with Zhengfang Zhou).
37. Lipschitz equivalence of Cantor sets: algebraic and geometric properties, a survey paper to appear in *Contemporary Math* (with Huojun Ruan and Hui Rao).
38. The performance of PCM quantization under tight frame representations, *SIAM J. of Math. Analysis*, Volume 44 No. 4 (2012), 2802–2823 (with Zhiqiang Xu).
39. An empirical mode decomposition analysis for visual stylometry, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Volume 34, No. 11 (2012), 2147-2157 (with J. Hughes, D. Mao, D. Rockmore and Q. Wu).
40. Spectral tetris fusion frame constructions, *Journal of Fourier Analysis and Applications*, Volume 18, No. 4 (2012), 828–851 (with P. Casazza, M. Fickus, A. Heinecke and Z. Zhou).
41. Sparse PCA by iterative elimination algorithm, *Advances in Computational Math.*, Volume 36, Number 1 (2012), 137-151 (with Qiang Wu).
42. Lipschitz equivalence of Cantor sets and algebraic properties of contraction ratios, *Transactions of AMS* 364 (2012), 1109-1126 (with Hui Rao and Huojun Ruan).
43. Mode decomposition evolution equations, *Journal of Scientific Computing*, 50, Issue 3 (2012), 495-518 (with Guowei Wei and Siyang Yang).
44. Coarse quantization for random interleaved sampling of bandlimited signals, *Mathematical Modelling and Numerical Analysis* 46, Issue 03 (2012), 605 - 618 (with A. Powell, J. Tanner and O. Yilmaz).
45. Selective extraction of entangled textures via adaptive PDE transform, *International Journal of Biomedical Imaging* Vol 2012 (2012), 1-9 (with Guowei Wei and Siyang Yang).
46. Partial differential equation transform: Variational formulation and Fourier analysis, *International Journal for Numerical Methods in Biomedical Engineering*, Volume 27, No 12 (2011), 1996-2020 (with Guowei Wei and Siyang Yang).
47. Iterative filtering decomposition based on local spectral evolution kernels, *J. Scientific Computing*, Volume 50 No. 3 (2012), 629–664 (with Guowei Wei and Siyang Yang).

48. A geometric construction of tight Gabor frames with multivariate compactly supported smooth windows, *J. Fourier Analysis and Applications*, Volume 18, No. 2 (2012), 223–239 (with Götz Pfander and Peter Rashkov).
49. Reconstruction from Irregular Fourier Samples and Gaussian Spectral Mollifiers, *Far East J. of Mathematics* 53 number 2 (2011), 109–121 (with L. Wang).
50. Constructing tight fusion frames, *Applied and Comp. Harmonic Analysis* 30 (2011), 175–187. (with P. Casazza, M. Fickus, D. Mixon and Z. Zhou).
51. Modeling and simulation of the horizontal component of the magnetic field by fractional stochastic differential equation in conjunction with empirical mode decomposition, *Journal of Geophysical Research - Space Physics* VOL. 115 (2010), A10219 (with Zu-Guo Yu, Vo Anh and Dong Mao).
52. Classification of refinable splines in \mathbf{R}^d , *Constructive Approximation* Volume 31, Number 3 (2010), 343–358 (with Xinrong Dai).
53. The golden ratio encoder, *IEEE Info. Theory* 56 Issue 10 (2010), 5097 - 5110 (with Ingrid Daubechies, Sinan Gunturk and Ozgur Yilmaz).
54. On the structures of generating iterated function systems of cantor sets, *Adv. in Math.* 222 (2009), 1964–1981 (with Dejun Feng).
55. Convergence of a convolution-filtering-based algorithm for empirical mode decomposition, *Advances in Adaptive Data Analysis* 1 No. 4 (2009), 561–571 (with Chao Huang and Lihua Yang).
56. Iterative filtering as an alternative for empirical mode decomposition, *Advances in Adaptive Data Analysis* 1 No. 4 (2009), 543–560 (with Luan Lin and Haomin Zhou).
57. On the distribution of uniform quantization errors, *Applied and Computational Harmonic Analysis* 27 (2009), no. 3, 334–341 (with sergiy Borodachov).
58. The $\beta - \alpha$ encoder for robust A/D conversion, *Acta Appl. Math.* 107, Issue1 (2009), 313–323 (with D. Jimenez).
59. Multifractal analysis and authentication of Jackson Pollock paintings, *SPIE Proceeding on Computer Image Analysis in the Study of Art*, Vol 6810, 68100F (2008) (with Jim Coddington, John Elton and Dan Rockmore).
60. Sigma-delta quantization and the travelling salesman problem, *Advances in Computational Math.* 28 (2008), no. 2, 101–118.
61. The beta-alpha encoders for A/D conversion, *Proceedings of SPIE Optics and Photonics, Wavelets XII*, 2007 (with D. Jimenez).
62. On refinable sets, *Methods in Analysis and Applications* **14**, No. 2 (2007), 165–178. (with Xinrong. Dai).
63. Structure of refinable splines, *Appl. and Computatioanl Harm. Anal.* 22 (2007), no. 3, 374–381 (with Xinrong Dai and Dejun Feng).

64. The white noise hypothesis for uniform quantization errors, *SIAM J. Math Analysis* 38 (2007), no. 6, 2042–2056 (with D. Jimenez and L. Wang).
65. Refinable functions with non-integer dilations, *J. Funct. Anal.* 250 (2007), no. 1, 1–20 (with Xinrong Dai and Dejun Feng).
66. Simultaneous Translational and Multiplicative Tiling and Wavelet Sets in \mathbf{R}^2 , *Ind. J. Math.* 55 (2006), no. 6, 1935–1949 (with E. Ionascu).
67. Total Variation Wavelet Based Medical Image Denoising, *Int. J. Biomedical Imaging* Vol 2006 (2006), 1–6. (with Haomin Zhou)
68. Classification of refinable splines, *Constr. Approx.* 24 (2006), no. 2, 187–200. (with Xinrong Dai and Dejun Feng).
69. Some properties of spectral measures, *Appl. and Computaional Harm. Anal.* 20 (2006), no. 1, 149–157. (with Izabella Laba)
70. Generation of finite frames by Householder transformations, *Advances in Comp. Math.* 24 (2006), no. 1-4, 297–309. (with Dejun Feng and Long Wang).
71. A class of self-affine measures, *J. Fourier Anal. and Appl.* 11 (2005), pp 107–124. (with Dejun Feng).
72. Absolute continuity of self-similar measures and Bernoulli convolutions, *Asian J. Math.* 9 (2005), no. 2, pp 227–244 (with S-M Ngai).
73. Quantum integers and cyclotomy, *J. Num.Theory* 109 (2004), no.1, 120–135. (with Alex Borisov and Mel Nathanson).
74. Bernoulli convolutions associated with certain non-pisot numbers, *Adv. in Math.*, 187 (2004), 173–194. (with Dejun Feng)
75. The existence of Gabor Bases, *Contemporary Math.* Volume 345 (2004), (special issue), 183–192. (with D. Han)
76. On sparse complete Gabor systems, *Appl. and Comp. Harm. Anal.* 16 (2004), 60–67.
77. Substitution Delone sets, *Disc. and Comp. Geom.* 29 (2003) 175–209. (with J.C. Lagarias)
78. The uniformity of non-uniform Gabor bases, *Advances in Computational Math.* 18 (2003), pp 345–355. (with Youming Liu)
79. Self-affine tiling via substitution dynamical systems and Rauzy fractals, *Pacific J. Math.*, 206, no. 2 (2002), 465–485. (with V. Sirvent)
80. On spectral Cantor measues, *J. Functional Analysis*, 193 (2002), 409-420. (with I. Łaba).
81. Spectral Sets, tiling and wavelets, *Duke Math. J.* 114, no. 1 (2002), 43–57.
82. Disklike self-affine tiles in \mathbf{R}^2 , *Disc. and Comp. Geometry*, 26 (2001), no. 4, 591–601. (with C. Bandt)
83. Refinement equations with nonnegative coefficients, *J. Approx. Th.*, 113 (2001), no. 2, 207–220.

84. Lattice Tiling and the Weyl-Heisenberg families, *Geometric and Funct. Anal.*, 11 (2001), no. 4, 742–758. (with Deguang Han)
85. Universal spectra, universal tiling sets and the spectral set conjecture, *Math. Scand.* 88 (2001), 246–256. (with S. Pedersen)
86. Hausdorff dimension of overlapping self-similar sets, *J. London Math Soc.* (2) **63** (2001) 655–672. (with S. Ngai)
87. On the number of Daubechies scaling functions and a conjecture of Chyzak et al., *Experimental Mathematics* 10 (2001), 87–89.
88. On 2-reptiles in the plane, *Geom. Ded.* 82 (2000), 325–344. (with S. Ngai, V. Sirvent, P. Veerman)
89. Orthonormal bases of exponentials for the n -cube, *Duke J. Math.*, 103, No.1 (2000), 25–37. (with Jeff Lagarias and James Reeds)
90. Orthogonality criteria for compactly supported refinable functions and refinable function vectors, *J. Fourier Anal. and Appl.* 6, Issue 2 (2000), 173-190. (with J.C. Lagarias)
91. Geometry of self-affine tiles II, *Ind. J. Math* Vol 48, No. 1 (1999), 24-42. (with Jie Li, Rick Kenyon, Robert Strichartz)
92. Geometry of self-affine tiles I, *Ind. J. Math* Vol 48, No. 1 (1999), 1-23. (with Robert Strichartz)
93. Construction of compactly supported symmetric scaling functions, *Applied and Comp. Harmonic Analy.*, 7 (1999) 137-150. (with Eugene Belogay)
94. Haar-type multiwavelet bases and self-affine multi-tiles, *Asian J. Math.*, Vol 3, No 2 (1999), 387-400. (with Tim Flaherty)
95. Arbitrarily smooth orthogonal nonseparable wavelets in \mathbf{R}^2 , *SIAM Math. Analysis*, Vol 30, No 3 (1999), 678-697. (with Eugene Belogay)
96. On the use of high order ambiguity functions for multicomponent polynomial phase signals, *Signal Processing*, 65 (1998) 283-296. (with Guotong Zhou)
97. Exploiting lag diversity in the high order ambiguity functions for polynomial phase signals, *IEEE Letters on Signal Processing*, 4 (1997) 240–242. (with Guotong Zhou)
98. The spectral set conjecture and factorization of finite abelian groups, *J. Functional Analysis*, 145 (1997), 73–98. (with J. C. Lagarias)
99. Integral self-affine tiles in R^n part II: lattice tilings, *J. Fourier Analysis and Appl.*, 3 (1997), 83–101. (with J.C. Lagarias)
100. Integral self-affine tiles in R^n I. Standard and nonstandard digit set, *J. of London Math. Soc.*, (2) 54 (1996), 161-179. (with J.C. Lagarias)
101. Self-affine tiles in R^n , *Advances in Math.*, 121, No. 1 (1996), 21–49. (with J.C. Lagarias)
102. Haar bases and algebraic number theory, *J. Number Theory*, 57 (1996), 181–197. (with J.C. Lagarias)

103. Two-scale dilation equations and the mean spectral radius, *Random and Computational Dynamics*, 4 (1996), 49-72.
104. Radix expansions for the orthant \mathbf{R}_+^n , *Trans. of AMS*, 348 (1996), 99-117. (with J.C. Lagarias)
105. Tiling the line with the translates of one tile, *Inven. Math.*, 124, fasc 2 (1996), 341-365. (with J.C. Lagarias)
106. Haar-type orthonormal wavelet bases in \mathbf{R}^2 , *J. Fourier Analysis and Appl.*, 2 (1995), 1-14. (with J. C. Lagarias)
107. Existence and regularity of solutions to a variational problem of Mumford and Shah: a constructive approach. *SIAM J. Optimization*, 5 (1995), 892-913.
108. Two-scale dilation equations and the cascade algorithm, *Random and Computational Dynamics*, 3 (1995), 289-309.
109. The finiteness conjecture for the generalized spectral radius of a set of matrices, *Linear Algebra and its Applications*, Vol 214 (1995), 17-42. (with J.C. Lagarias)
110. On the non-existence of limiting processes for Browning models of multi-class queuing networks, *Queueing Systems Theory and Applications*, 13 (1993), 41-46. (with Jim Dai)
111. Multi-dimensional two-scale dilation equations, in *Wavelets: A Tutorial in Theory and Applications*, (C. K. Chui, ed.), Academic Press, New York, 1992, 295-325. (with M. Berger)
112. Bounded semigroups of matrices, *Linear Algebra and its Applications*, 116 (1992) 21-27. (with M. Berger)
113. Image segmentation by variational methods and elliptic boundary value problems, Ph.D. Thesis, Harvard University, 1989.
114. On the order and number of zero divisors of a finite ring, *Journal of University of Science and Technology of China*, September 1982, 140-142. (in Chinese)

PAPERS, REPORTS AND MANUSCRIPTS IN LOGISTICS:

1. The 2003 China Logistics Users Survey: Results and Findings, *TLI-AP report*, August 2003
2. The 2002 China Logistics Providers Survey: Results and Findings, *TLI-AP report*, Nov. 2002
3. Company reports for Exel, ST-Anda, Danzas AEI, Sinotrans, CMST, *TLI reports*, July 2002

MATHEMATICAL PRESENTATIONS:

1. Image segmentation — the Mumford-Shah problem, SIAM Conference on Dynamical Systems, May 7-11, 1990, Orlando, FL.
2. Bounded semigroups of matrices, Iterated Functions System, Co. seminar series, June 1991, Norcross, GA.

3. Spectral radii and L^p solutions of two-scale dilation equations, April 15, 1992, MIT, Cambridge, MA.
4. Self-similar lattice tilings in R^2 , Iterated Functions System, Co. seminar series, June 1991, Norcross, GA.
5. Nonexistence of heavy traffic limits for multiclass queueing networks, Conference on Applied Probability in Engineering, COmputer and COmmunication Sciences INRIA/ORSA/TIMS/SMAL, June 16–18, 1993, Paris.
6. Self-replicating tilings, Univ. of Pittsburgh, April 1993, Pittsburgh, PA.
7. Self-affine tiles and Haar wavelet basis, colloquium talk, Univ. of Pittsburgh, April 1993, Pittsburgh, PA.
8. Self-affine tiles in R^n , Univ. of Conn., May 1993, Storrs, CT.
9. Self-affine tiles in R^n , Cornell University, May 1993, Ithaca, NY.
10. Symbolic sequences and aperiodic tilings, Georgia Tech., October 1993, Atlanta, GA.
11. Self-affine tiles: an introduction, Georgia Tech., October 1993, Atlanta, GA.
12. Self-affine tiles and Haar wavelet basis, Georgia Tech., November 1993, Atlanta, GA.
13. Orthogonality criteria for compactly supported wavelets, Georgia Tech., May 1994, Atlanta, GA.
14. Orthogonality criteria for compactly supported wavelets, Pittsburgh Conference on Wavelets and Fractals, May 1994, Pittsburgh, PA.
15. Haar-type wavelet bases in R^2 , IMACS Congress, July 1994, Atlanta, GA.
16. Self-affine tiles and Haar Wavelets, UNC Charlotte Conference on Wavelets, July 1996, Charlotte, NC.
17. Workshop on wavelets, Univ. of Science and Tech. of China, August 1996, Hefei, China.
18. Colloquium talk, Univ. of Science and Tech. of China, September 1996, Hefei, China.
19. Colloquium talk, Self-affine tiles and Wavelets, University of Maryland, November 1996, College Park, MD.
20. Colloquium talks (There are a total of three one hour lectures on three different topics), Chinese Univ. of Hong Kong, December 1996, Hong Kong.
21. Colloquium talk, Zhongshan Univ., December 1996, Guangzhou, China.
22. Colloquium talk, Wright State Univ., February 1997, Dayton, OH.
23. Colloquium talk, Univ. of Colorado at Colorado Springs, March 1997, Colorado Springs, CO.
24. Analysis seminar, Cornell University, March 1997, Ithaca, NY.
25. AMS Conference, UMD, April 1997, College Park, MD.

26. Short course on wavelets, ImageTech97, April 1997, Atlanta, GA.
27. Colloquium talk, Georgia State Univ. Oct 1997, Atlanta, GA.
28. Colloquium talk, Clemson Univ., Oct 1997, Clemson, SC.
29. Colloquium talk, Univ. of North Carolina at Greensboro, Oct 1997, Greensboro, NC.
30. Colloquium talk, Univ. of North Carolina at Charlotte, Oct 1997, Charlotte, NC.
31. Colloquium talk, Atlanta Institute of Arts, Oct 1997, Atlanta, GA.
32. Colloquium talk, Univ. of Georgia, Oct 1997, Athens, GA.
33. Colloquium talk, Univ. of Louisville, Nov 1997, Louisville, KY.
34. Colloquium talk, Vanderbilt Univ., Nov 1997, Nashville, TN.
35. Colloquium talk, Columbus State Univ., Dec 1997, Columbus, GA.
36. Invited talk, The Ninth Int. Conf. on Approx. Th., Jan 1998, Nashville, TN.
37. Dixieland Seminar, Emory Univ., Feb 1998, Atlanta, GA.
38. Invited talk, AMS Regional Conference in Louisville, March 1998, Louisville, KY.
39. Seminar talk, Dynamical System Seminar, Georgia Tech, May 1998, Atlanta, GA.
40. Invited talk, Int. Conf. on Fractal Geometry, August 1998, Greifswald, Germany.
41. Invited talk, Joint Annual AMS-MAA Meeting, January 1999, San Antonio, TX.
42. Invited talk, Workshop on Fractal Geometry (first of the two workshops on the subject), May 3& 4, 1999, in Chinese University of Hong Kong, Hong Kong.
43. Invited talk, Workshop on Fractal Geometry (second of the two workshops on the subject), May 11, 1999, in Chinese University of Hong Kong, Hong Kong.
44. Colloquium talk, National University of Singapore, June 15, 1999, Singapore.
45. Colloquium talk, National University of Singapore, June 22, 1999, Singapore.
46. Invited talk (1 of 2), Fractal Geometry Workshop, July 26, 1999, in the Morningside Institute of Mathematics, Beijing, China.
47. Invited talk (2 of 2), Fractal Geometry Workshop, July 29, 1999, in the Morningside Institute of Mathematics, Beijing, China.
48. Invited talk, Harmonic Analysis and Applications, a conference in honor of John Benedetto on his 60th birthday, University of Maryland, Oct 7-10, 1999, College Park, MD.
49. invited talk, AMS meeting, UNC Charlotte, Charlotte, NC, Oct 15-17.
50. Colloquium talk, Georgia Tech, Nov., 1999, Atlanta, GA.
51. Invited talk, Bell Labs, Lucent Technologies, Dec 9, 1999, Murray Hills, NJ.

52. Invited talk, National University of Singapore, January 26, 2000, Singapore.
53. Invited talk, Workshop on Fractals and Wavelets, Singapore, May 2000, Singapore.
54. Invited talks (two one-hour talks, on different topics), Workshop on Wavelets and Integral Equations, The Morningside Center for Mathematics, June 2000, Beijing, China
55. Colloquim talk, Beijing University, June 2000, Beijing, China.
56. Invite talk, City University of Hong Kong, August 2000, Hong Kong.
57. Colloquium talk, Univ. of Maryland, October 2000, College Park, MD.
58. Invited talk: International Workshop on Fractal Geometry, December 2000 (two-hour plenary speaker), Hong Kong.
59. Invited talk: DIMACS Workshop on wavelets, April 2001, DIMACS, New Brunswick, NJ.
60. Invited talk: International Conference of Computational Harmonic Analysis, June 4, 2001, Hong Kong.
61. Invite talk: Workshop on Scientific Computation, National Univ. of Singapore, June 2001, Singapore.
62. Invited lecture series: Summer Workshop on Dynamical Systems, Univ. of Science and Tech. of China, July 2001, Hefei, China.
63. Invite talk: Morningside Institute of Mathematics, July 2001, Beijing, China.
64. Keynote speaker: First Tibetan Conference in Mathematics, August 2001, Lhasa, Tibet, China.
65. Invited talk, Mathfest, Western Kentucky University, Oct 2001, Bowling Green, KY.
66. Colloquim talk, West Virginia University, Jan 24, 2002, Morgantown, WV.
67. Seminar talk, University of Maryland, Feb, 2002, College Park, MD.
68. Invited talk, February Fourier Talks at University of Maryland, Feb 2002, College Park, MD.
69. Seminar talk, Princeton Univesity, April 1, 2002, Princeton, NJ.
70. Invited talk, Workshop on wavelets and Operator theory, Texas A&M, April, 2002, College Station, TX.
71. Plenary speaker, ICM Satellite Conference on Fractal Geometry and Applications, Nanjing, August 2002, Nanjing, China.
72. Invited speaker, AMS meeting, November 2002, Orlando, FL,
73. Seminar talk, The Chinese University of Hong Kong, December 2002, Hong Kong.
74. Invited speaker, The 2nd International Symposium on Computational Science, December 2002, Guangzhou, China.

75. Invited speaker (One of the main speakers, giving two one-hour lectures), Aspect of Fractals, Kyoto University, Jan 14 and Jan 16, 2003, Kyoto, Japan.
76. Invited speaker (One of the main speakers, giving two one-hour lectures), Workshop on self-affine tilings, Tsuda College, January 24, 2003, Tokyo, Japan.
77. Colloquium speaker (two one-hour lectures), University of Colorado, Feb 15-19, 2003, Boulder, CO.
78. Invited speaker (1 hour), Vienna Workshop on Analysis, Vienna, February-March 2003.
79. Invited speaker, The 3rd International Conference on Fractal Geometry, March 2003, Friederichroda, Germany.
80. Invited seminar talk, Michigan State University, April 2003, East Lansing, MI.
81. Invited speaker, Banff Conference on Applicable Harmonic Analysis, Banff International Research Station, June 2003, Banff, Canada.
82. Invited speaker (40 minutes), Canadian Math. Soc. Meeting, June 2004, Edmonton, Alberta, Canada.
83. Invited 2-hours speaker, YAMS Conference, Furman College, July 2003, Greenville, SC.
84. Invited speaker (1 hour), International Conference on Aperiodic Orders, August 2003, Greifswald, Germany.
85. Colloquium speaker, Washington Univ. in St. Louis, March 2004, St. Louis, MO.
86. Keynote speaker, International Conference in Applied Harmonic Analysis, May 2004, Nashville, TN.
87. Invited speaker, Banff workshop on Aperiodic Orders, Banff International Research Station, May 2004, Banff, Canada.
88. Plenary speaker, Workshop on wavelets and fractals, June 2004, Hangzhou, China.
89. Invited speaker, Tsinghua University, June 2004, Beijing, China.
90. Invite speaker, Academia Sinica, Mathematical Institute, July 2004, Beijing, China.
91. Plenary speaker, International conference on fractal geometry and applications, July 2004, Changchun, China.
92. Colloquium speaker, Univ. of Alberta, September 2004, Edmonton, Canada.
93. Invited speaker, AMS conference, October 2004, Evanston, IL.
94. Seminar speaker, Research Horizon seminar, Georgia Tech, November 2004, Atlanta, GA.
95. Invited 45 minutes speaker, International Congress of Chinese Mathematicians, December 2004, Hong Kong.
96. Invited speaker, AMS-MAA Annual Joint Meeting, January 2005, Atlanta, GA.
97. Colloquium speaker, University of Michigan, February 2005, Ann Arbor, MI.

98. Seminar talk, Analysis Seminar at Georgia Tech, March 2005, Atlanta, GA.
99. Colloquium speaker, Kennesaw State University, April 2005, Kennesaw, GA.
100. Colloquium speaker, Iowa State Univ., April 2005, Ames, Iowa.
101. Invited speaker, CSCAMM Workshop on Redundant Systems and Quantization, University of Maryland, April 2005, College Park, MD.
102. Invited speaker, Int. Conference on Applicable Analysis, May 2005, Hangzhou, China.
103. Invited talk, Univ. of Science and Tech, May 2005, Hefei, China.
104. Colloquium speaker, Yunnan Normal University, June 2005, Kunming, China.
105. Two invited lectures, Tsinghua University, June 2005, Beijing, China.
106. Invited speaker, Workshop at the Schrodinger Institute, July 2005, Vienna, Austria.
107. Seminar speaker, University of Crete, July 2005, Crete, Greece.
108. Invited speaker, Aperiodic Order Summer School, Univ. of Victoria, August 2005, Victoria, Canada.
109. Colloquium speaker, Southern State Univ., October 2005, Statesboro, GA.
110. Invited speaker, International Conference on Wavelets and Applications, December 2005, Macau, China.
111. Seminar speaker, Chinese Univ. of Hong Kong, December 2005, Hong Kong.
112. Invited lecture to high school students, Dec 2005, Hong Kong.
113. Invited talk, Joint AMS-MAA Meeting, Jan 2006, San Antonio, TX.
114. Invited talk, February Fourier Talks, University of Maryland, February 2006, College Park, MD.
115. Colloquium, Indiana University, February 2006, Bloomington, Indiana.
116. Invited speaker, Banff Workshop on Coarse Quantization and Redundant Systems, Banff International Research Station, March 2006, Banff, Canada.
117. Colloquium speaker, Vanderbilt University, April 2006, Nashville, TN.
118. Invited talk, AMS Conference at San Francisco, April 2006, San Francisco, CA.
119. Invited speaker, Current Trends in Harmonic Analysis and Applications, May 2006, Boulder, CO.
120. Plenary speaker, Summer Symposium in Real Analysis, June 2006, Ashville, NC.
121. Colloquium speaker, Princeton University, November, 2006, Princeton, NJ.
122. Invited speaker, Banff Workshop, Banff International Research Station, December 2006, Banff, Canada.

123. Colloquium speaker, Michigan State University, February 2007, East Lansing, MI.
124. Invited speaker, February Fourier Talks at University of Maryland, February 2007, College Park, MD.
125. Colloquium speaker, South Carolina State University, March 20, 2007, Orangeburg, SC.
126. Colloquium speaker, George Washington University, April 2007, Washington DC.
127. Seminar speaker, University of Maryland, April 2007, College Park, MD.
128. Seminar speaker, NC State University, May 4, 2007, Raleigh, NC.
129. Invited speaker, Morningside Institute of Mathematics, August 2007, Beijing, China.
130. Invited 45 minutes speaker, International Conference on Applicable Analysis, August 2007, Zhuhai, China.
131. Invited speaker, Banff Workshop on Applicable Analysis, Banff International Research Station, September 2007, Banff, Canada.
132. Invited speaker, Chinese University of Hong Kong, December 2007, Hong Kong.
133. Invite speaker (two talks), Joint AMS-MAA Meeting, January 2008, San Diego, CA.
134. Invite speaker, Conference on Info Science and Systems, Princeton, Mar. 2008, Princeton, NJ.
135. Invite speaker, AMS Meeting, March 2008, Baton Rouge, LA.
136. Colloquium speaker, University of Georgia, April 2008, Athens, GA.
137. Plenary speaker, Caracas Univ. Workshop on Mathematics, May 2008, Caracas, Venezuela.
138. Invited speaker, International Conference on Applied Mathematics, June 2009, Hong Kong.
139. Invited speaker, Singapore Workshop on Wavelets, June 2008, Singapore.
140. Invited speaker, Singapore Workshop on Imaging, June 2008, Singapore.
141. Invited speaker, Iowa VIGRE Workshop, June 2008, Iowa City, Iowa.
142. Invited speaker, Advances in Mathematics Conference, June 2008, Hefei, China.
143. Invited speaker, Fudan Univ., July 2009, Shanghai, China.
144. Invited participant, American Institute of Mathematics Workshop, August 2009, Palo Alto, CA.
145. Colloquium speaker, Wayne State Univ., September 2009, Detroit, MI.
146. Colloquium speaker, Illinois Institute of Technology, September 2009, Chicago, IL.
147. Plenary speaker, Int. Conf. on Hilbert-Huang Transform, December 2008, Guangzhou, China.
148. Invited speaker, Chinese University of Hong Kong, December 2008, Hong Kong.

149. Invited speaker, Chinese Academy of Sciences Graduate School, January 2009, Beijing, China.
150. Seminar speaker, Rutgers Univ., April 2009, New Brunswick, NJ.
151. Plenary speaker, 2009 Int. Conf. on Nonlinear and Stochastic Dynamics, June 2009, Chengdu, China.
152. Invited speaker, Chinese Academy of Sciences, June 2009, Beijing, China.
153. Colloquium speaker, Air Force Institute of Technology, June 2009, Dayton, OH.
154. Invited speaker, Clemson University (for REU), July 2009, Clemson, SC.
155. Colloquium speaker, Central Michigan University, September 2009, Mt. Pleasant, MI.
156. Seminar speaker, University of California at Irving, January 2010, Irving, CA.
157. Colloquium speaker, University of Houston, March 2010, Houston, TX.
158. Invited speaker, *From Banach Spaces to Frame Theory and Applications* Conference, May 2010, College Park, MD.
159. Distinguished Lecture, Zhejiang University, September 2010, Hangzhou, China.
160. Distinguished Lecture Series speaker, Zhongshan University, September 2010, Guangzhou, China.
161. Invited speaker, Workshop in Analysis and Geometry, Louisiana State University, Jan 4-5 2011, Baton Rouge, LA.
162. Seminar speaker, Georgia Institute of Technology, January 21 2011, Atlanta, GA.
163. Invite speaker, AMS Conference in Statesboro, in the fractal geometry session, March 2011, Statesboro, GA.
164. Invited participant and speaker, Oberwolfach workshop *Frames, Operator Theory, Wavelets and Fractals*, March 2011, Oberwolfach, GA.
165. Colloquium speaker, Vanderbilt University, April 2011, Nashville, TN.
166. Invited Speaker, Conference on Applied Harmonic Analysis and Approximation Theory (AHAAT 2011), May 20-21 2011, Guangzhou, China.
167. Invited Speaker, The Fourth International Conference on Computational Harmonic Analysis (ICCHA4), May 23-27, 2011, Hong Kong.
168. Invited Seminar Speaker, Beijing University, May 27 2011, Beijing, China.
169. Invited Speaker, International Conference on Interdisciplinary Applied and Computational Mathematics, June 17-21, 2011, Hangzhou, China.
170. Invited Summer School Lecturer, Graduate School of the Chinese Academy of Science, June 2011 (5 two-hour lectures), Beijing, China.

171. Invited Speaker, International Workshop on Risk Management, Shanghai Jiaotong University, June 2011, Shanghai, China.
172. Computer Science Engineering Colloquium, Michigan State University, September 2011, East Lansing, China.
173. Seminar Speaker, Physics Department, Michigan State University, October 2011, East Lansing, MI.
174. Distinguished Lecture, Zhejiang University, October 2011, Hangzhou, China.
175. Invited Speaker, Banff Workshop *Mathematics: Muse, Maker and Measure of the Arts*, Banff International Research Station, December 2011, Banff, Canada.
176. Invited Speaker, Joint Mathematics Meeting, January 2012, Boston, MA.
177. Invited Speaker, American Mathematical Society sectional meeting, March 2012, Washington D.C.
178. Colloquium Speaker, Xian Jiaotong University, May 10, 2012, Xian, China.
179. Invited Speaker, The University of Science and Technology of China, May 15 2012, Hefei, China,
180. Invited Lecture, 3rd Midwest Conference on Mathematics of images and Surfaces, Michigan State University, June 15 2012, East Lansing, MI.
181. Plenary Speaker, Liberty Bell Summer Symposium in Real Analysis, Penn State Univ, Reading, June 26 2012, Reading, PA.
182. Invited Speaker, International Conference on Brain-Mind, Michigan State University, July 14, 2012, East Lansing, MI.
183. Invited Speaker, Workshop in Analysis and Probability — Operator Algebras, Frames and Undergraduate Research, Texas A&M Univ, July 20 2012, College Station, TX.
184. Invited Speaker, Joint Alberta-British Columbia Workshop, August 2012, Vancouver, Canada.
185. Invited Speaker, Erwin Schrödinger Institute Workshop on Phase Retrieval, October 2012, Vienna, Austria.
186. Invited Speaker, Sun Yat-Sun University, December 2012, Guangzhou, China.
187. Invited Speaker, IPAM Workshop on Adaptive Data Analysis, January 2013, Los Angeles, CA.
188. Plenary Speaker, MBI Workshop on Mathematical Challenges in Biomolecular/Biomedical Imaging and Visualization, February 2013, Ohio State University, Columbus, OH
189. Invited Speaker, Workshop on Phase Retrieval, February 2013, University of Maryland, College Park, MD.
190. Invited Speaker, Minisymposium on Stable Reconstruction from Noisy and Irregular Fourier Data, February-March 2013, Boston, MA.

191. Invited Speaker, Institute of Computational Mathematics, Chinese Academy of Sciences, May 2013, Beijing, China.
192. Invited Speaker, Guangzhou University, May 2013, Guangzhou, China
193. Invited Speaker, International Conference on Approximation Theory and Applications, May 20-24 2013, City University of Hong Kong.
194. Invited Speaker (Two Lectures), National Center for Mathematics and Interdisciplinary Sciences Hefei Branch Lecture Series, University of Science and Technology of China, June 2013, Hefei, China.
195. Invited Speaker, Beihang University, June 2013, Beijing, China.
196. Plenary Speaker, CIMPA 2013 (New Trends in Applied Harmonic Analysis, August 2013, Mar Del Plata, Argentina.
197. Invited Speaker, Conference on Fractal Geometry, December 2013 Guangzhou, China.
198. Invited speaker, Workshop on Data Analysis and Signal Processing, December 2013, Guangzhou, China.
199. Invited speaker, Banff Workshop on Multifractal Analysis, Stochastic Process and Their Applications, February 2014, Banff, Canada.
200. Special Undergraduate Lecture, Arizona State University, March 2014, Phoenix, Arizona.
201. Colloquium Speaker, University of Oklahoma, April 2014, Norman, Oklahoma.
202. Keynote Speaker, 5th International Conference on Computational Harmonic Analysis, May 19-23, 2014, Vanderbilt University, Nashville, Tennessee.
203. Invited Speaker, International Conference on Harmonic Analysis and Applications, Nankai University, June 2014, Tianjing, China.
204. Invite Lectures (a series of three lectures), Institute of Computational Mathematics, Chinese Academy of Sciences, June 2014, Beijing, China.
205. Invited Speaker, Sun Yat-Sun University, September 2014, Guangzhou, China
206. Invited Participant and Speaker, Research Cluster in the ICERM High-dimensional Approximation semester program, November 2014, Providence, RI.
207. Invited Speaker, 2014 Workshop on Applied Harmonic Analysis and Approximation Theory, Guangzhou, China.
208. Invited Speaker, 5th International Conference on Scientific Computing and Partial Differential Equation, Hong Kong Baptist Univ., December 2014.
209. Invited Speaker, International Conference on Learning and Approximation, December 2014, Fudan University, China.
210. Invited Speaker, Zhuhai Workshop on Tiling and Fractal Geometry, December 2014, Sun Yat-Sun University at Zhuhai. China.

211. Invited Speaker, IMA-HK-IAS Joint Program on Statistical and Computational Interface to Big Data, January 2015, HKUST, Hong Kong.
212. Invited Speaker, 2015 Joint AMS-MAA Annual Meeting, January 2015, San Antonio, Texas (two talks).
213. Invited Speaker, AMS Central Sectional Meeting, March 13-15, 2015, Michigan State University, East Lansing, MI 48824.
214. Invited Speaker, International Conference on Optimization, Sparsity, and Adaptive Data Analysis, March 2015, Morningside Institute of Mathematics, Beijing.
215. STEM Invited Lecture, Chicago State University (a lecture to mostly African American undergraduate students), April 2015.
216. Undergraduate IRE Lecture, HKUST, March 2015.
217. Invited Speaker, 2015 NCTS International Workshop on Dynamical Systems, May 2015, Taipei.
218. Plenary Speaker, Annual Meeting of the Hong Kong Mathematics Society, May 2015, Hong Kong.
219. Colloquium Speaker, Jilin University, June 2015, Changchun, Jilin.
220. Invited Speaker, Fractals and Related Fields III, September 2015, Porquerolles, France.
221. HKUST 25th Anniversary Speaker (one of the 4 representing the School of Science, HKUST), London.
222. Colloquium Speaker, Hunan University, October 2015, Changsha, Hunan.
223. Colloquium Speaker, Central South University, October 2015, Changsha, Hunan.
224. Invited Speaker, 2015 Zhuhai Conference on Dynamical Systems and Ergodic Theory, December 2015, Zhuhai.
225. Invited Speaker, Chongqing Conference on Fractal Geometry and Related Topics, December 2015, Chongqing.
226. Invited Speaker, Computational Science Research Center (CSRC), January 2016, Beijing.
227. Invited Speaker, Huazhong University of Science and Technology, March 2016, Wuhan.
228. Invited Speaker, Wuhan University, April 2016, Wuhan.
229. Invited Speaker, Huazhong Normal University, April 2016, Wuhan.
230. Invited Speaker, Workshop on Wavelets and their applications, April 2016, Nankai University, Tianjin.
231. Plenary Speaker, International Conference in Applied Mathematics, June 2016, Hong Kong.
232. Invited Speaker, International Workshop on Mathematical Aspects of Data Science 2016, May 2016, Fudan University, Shanghai.

233. 45 minutes Invited Speaker, International Congress of Chinese Mathematics, August 2016, Beijing.
234. Invited Speaker, 2016 NCTS Workshop on Dynamical Systems, August 2016, Taipei.
235. Plenary Speaker, Conference on Imaging, Vision and Learning based Optimization and PDEs, August-September 2016, Bergen, Norway.

PRESENTATIONS (IN LOGISTICS):

1. Keynote speaker, *The China First Seminar* (sponsored by DHL), Singapore Marina Mandarin Hotel, July 2002, Singapore.
2. seminar talk, The Logistic Institute-Asia Pacific, July 2002, Singapore.
3. seminar talk, The Logistic Institute-Asia Pacific, August 2002.
4. Main speaker, Zhuhai Conference on China Logistics, June 2004, Zhuhai, China.
5. Main speaker, Zhongshan Conference on China Logistics, June 2004, Zhongshan, China.
6. Main speaker, Beijing Workshop on China Logistics, July 2004, Beijing, China.
7. Main speaker, Shanghai Workshop on China Logistics, July 2004, Shanghai, China.