Yangbo Ye

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Education
- 10/1981-5/1986 Columbia University, Department of Mathematics, New York. Ph.D, M.Phil, M.A.
- 3/1978-7/1981 Tsinghua University, Department of Applied Mathematics, Beijing, China. Graduated.

Faculty Positions
- 8/1990-present The University of Iowa, Iowa City. Professor of Mathematics.
- 6/1998-present Shandong University, Jinan, China. Chang Jiang Chair Professor of Mathematics.
- 4/2002-present, Affiliated faculty of the UI Interdisciplinary Program in Applied Mathematical and Computational Sciences.

Short-term Positions
- 2/2010-3/2010, Institute for Advanced Study, Princeton, short-term visitor.
- 5/2006-6/2006, Université Henri Poincaré Nancy 1, France, visiting professor.
- 12/2002-1/2003, National Center for Theoretical Sciences Mathematics Division, Taiwan, visitor.

Award and Honor
- 4/8/2008 *Inverse Problems* 2007 Highlights: Paper [38] (first author, major contribution) was selected by the *Inverse Problems* Editorial Board as one of the 2007 Highlights.

Research Grants
- 4/2008-3/2011 Chang Jiang Chair Professorship grant, PI, Ministry of Education of China.
- 3/2006-3/2008 NSA grant, PI, *Bounds for automorphic L-functions, their zeros, functoriality, and prime number theorem.*
- 12/2004-12/2005 University of Iowa Mathematical and Physical Sciences Funding Program Award, PI, *Number theory and computed tomography.*
- 4/2005-6/2005 Ky and Yu-Fen Fan Fund Travel Grant for the Chinese Exchange Program from the American Mathematical Society, through Shandong University.
- 2/20032/2005 NSA Grant MDA904-03-1-0066, PI, *Zeros and Subconvexity of L-Functions.*
- 12/2002-6/2004 University of Iowa Carver Scientific Research Initiative Grant Program, PI, *Reconstruction algorithm for discrete computed tomography.*

Peer-Reviewed Research Articles
- [57] Xiumin Ren and Yangbo Ye, Resonance of automorphic forms for $GL(3)$. Preprint, eual contribution.
- [56] Yangbo Ye, Hengyong Yu and Ge Wang, Gel'fand-Graev's reconstruction formula in 3D real spaces, submitted. Major contribution.
- [55] Xiumin Ren and Yangbo Ye, Resonance between automorphic forms for $GL(2)$ and exponential functions, to appear in *Science in China*. Equal contribution.

- [54] Yangbo Ye, Hengyong Yu, and Ge Wang, Interior tomography: mathematical analysis, in: *Biomedical Mathematics: Promising Directions in Imaging, Therapy Planning and Inverse Problems*, Yair Censor, Ming Jiang and Ge Wang (Editors), to be published by Medical Physics Publishing, Madison, Wisconsin, USA, to appear. Major contribution.
- [53] Ge Wang, Hengyong Yu, and Yangbo Ye, Interior tomography: practical applications, in: *Biomedical Mathematics: Promising Directions in Imaging, Therapy Planning and Inverse Problems*, Yair Censor, Ming Jiang and Ge Wang (Editors), to be published by Medical Physics Publishing, Madison, Wisconsin, USA, to appear. Minor contribution.
- [52] Yangbo Ye and Jianya Liu, The Langlangs program, an invited survey article in: *10000 Selected Problems in Sciences, Mathematics*, Science Press, Beijing, 2009 (in Chinese), 114-121. Major contribution.
- [51] Jianya Liu and Yangbo Ye, Functoriality of automorphic L-functions through their zeros, *Science in China Series A: Mathematics*, **52** (2009), 1-16. Equal contribution.
- [50] Ge Wang, Hengyong Yu and Yangbo Ye, A scheme for multi-source interior tomography; Medical Physics, 36(8): 3575-3581, 2009. Minor contribution.
- [49] Jianya Liu and Yangbo Ye, Correlation of zeros of automorphic L-functions, *Science in China Series A: Mathematics*, **51**(7) (2008), 1147-1166. Equal contribution.
- [48] Hengyong Yu, Yangbo Ye, and Ge Wang, Interior reconstruction using the truncated Hilbert transform via singular value decomposition, *Journal of X-ray Science and Technology*, **16** (2008), 243-251. Second contribution.
- [47] Jiehua Zhu, Xiezhang Li, Yangbo Ye, and Ge Wang, Analysis on the strip-based projection model for discrete tomography, *Discrete Applied Mathematics*, **156** (2008), 2359-2367. Minor contribution.
- [46] Yangbo Ye, Hengyong Yu, and Ge Wang, Exact Interior Reconstruction from truncated limited-angle projection data, *International Journal of Biomedical Imaging*, **2008** (2008), Article ID 427989, 6 pages. Major contribution.
- [45] Hengyong Yu, Yangbo Ye, and Ge Wang, Interior Tomography: Theory, Algorithms and Applications, invited paper, in: *Developments in X-Ray Tomography VI*, edited by Stuart Stock, *Proceedings of SPIE*, **7078** (2008), Article ID 70780F, 12 pages. Equal contribution.
- [44] Yuk-Kam Lau, Jianya Liu, and Yangbo Ye, Shifted convolution sums of Fourier coefficients of cusp forms, in: *Number Theory Sailing on the Sea of Number Theory, Proceedings of the 4th China-Japan Seminar*, edited by Shigeru Kanemitsu and Jianya Liu, World Scientific, Singapore, 2007, pp. 108-135. Equal contribution.
- [43] Jianya Liu and Yangbo Ye, Perron's formula and the prime number theorem for automorphic L-functions, *Pure and Applied Mathematics Quarterly*, **3** (2007), 481-497. Equal contribution.
- [42] Jie Wu and Yangbo Ye, Hypothesis H and the prime number theorem for automorphic representations, *Functiones et Approximatio Commentarii Mathematici*, **37** (2007), 461-471. Equal contribution.
- [41] Hengyong Yu, Yuchuan Wei, Yangbo Ye, and Ge Wang, Fan-beam and cone-beam lambda tomography for discontinuous scanning loci, *Physics in Medicine and Biology*, **52**(14) (2007), 4331-4344. Minor contribution.
- [40] Yangbo Ye, Hengyong Yu, and Ge Wang, Exact Interior Reconstruction with Cone-beam CT, *International Journal of Biomedical Imaging*, **2007** (2007), Article ID: 10693, 5 pages. Major contribution.

- [39] Yangbo Ye, Hengyong Yu, Yuchuan Wei, and Ge Wang, A General Local Reconstruction Approach Based on a Truncated Hilbert Transform. *International Journal of Biomedical Imaging*, **2007** (2007), Article ID: 63634, 8 pages. Major contribution.
- [38] Yangbo Ye, Hengyong Yu, and Ge Wang, Cone-beam pseudo-lambda tomography, *Inverse Problems*, **23** (2007), 203-215. Major contribution.
- [37] Hengyong Yu, Yuchuan Wei, Yangbo Ye, and Ge Wang, Lambda tomography with discontinuous scanning trajectories, *Physics in Biology and Medicine*, **52** (2007), 4331-4344. Minor contribution.
- [36] Ge Wang, Yangbo Ye, and Hengyong Yu, Topical Review: Approximate and exact cone-beam reconstruction with standard and non-standard spiral scanning, *Physics in Medicine and Biology*, **52** (2007), R1-R13. Second contribution.
- [35] Yangbo Ye, The fourth power moment of automorphic L-functions for $GL(2)$ over a short interval, *Transactions of the American Mathematical Society*, **358** (2006), 2259-2268.
- [34] Yuk-Kam Lau, Jianya Liu, and Yangbo Ye, A new bound $k^{2/3+\varepsilon}$ for Rankin-Selberg L-functions for Hecke congruence subgroups, *International Mathematics Research Papers*, Volume 2006, Article ID 35090, 1-78. Equal contribution.
- [33] Yuk-Kam Lau, Jianya Liu, and Yangbo Ye, Subconvexity bounds for Rankin-Selberg L-functions for congruence subgroups, *Journal of Number Theory*, **121** (2006), 204-223. Equal contribution.
- [32] Jianya Liu and Yangbo Ye, Petersson and Kuznetsov trace formulas, in: *Lie Groups and Automorphic Forms*, American Mathematical Society and the International Press, 2006, 147-168. Equal contribution.
- [31] Jianya Liu and Yangbo Ye, Zeros of automorphic L-functions and noncyclic base change, in: *Number Theory: Tradition and Modernization, Developments in Mathematics*, **15**, edited by W. Zhang and Y. Tanigawa, Springer 2006, 119-152. Equal contribution.
- [30] Hengyong Yu, Yangbo Ye, Shiying Zhao, and Ge Wang, Studies on Palamodov's algorithm for cone-beam CT along a general curve, *Inverse Problems*, **22** (2006), 447-460. Second contribution.
- [29] Hengyong Yu, Yangbo Ye, Shiying Zhao, and Ge Wang, Reply to the comment on 'Studies on Palamodov's algorithm for cone-beam CT along a general curve', *Inverse Problems*, **22** (2006), 1505-1506. Second contribution.
- [28] Hengyong Yu, Yangbo Ye, and Ge Wang, Practical cone-beam lambda tomography, Medical Physics, **33** (2006), 3640-3646. Second contribution.
- [26] Hengyong Yu, Yangbo Ye, Shiying Zhao, and Ge Wang, Local ROI reconstruction via generalized FBP and BPF algorithms along more flexible curves, *International Journal of Biomedical Imaging*, Volume **2006** (2006), Article ID 14989, 7 pages. Second contribution.
- [26] Ge Wang, Yangbo Ye, and Hengyong Yu, Approximate and exact cone-beam reconstruction with standard and non-standard spiral scanning, invited paper in: *Developments in X-Ray Tomography V*, edited by Ulrich Bonse, Proceedings of SPIE Volume **6318** (2006), Article ID 63180F, 11 pages. Second contribution.
- [25] Yangbo Ye, Hengyong Yu, and Ge Wang, Skew cone beam Lambda tomography, invited paper in: *Developments in X-Ray Tomography V*, edited by Ulrich Bonse, Proceedings of SPIE, Volume **6318** (2006), Article ID 63180G, 10 pages. Major contribution.

- [24] Hengyong Yu, Yangbo Ye, and Ge Wang, Image reconstruction via truncated Lambda tomography, in: *Developments in X-Ray Tomography V*, edited by Ulrich Bonse, Proceedings of SPIE, Volume **6318** (2006), Article ID 63181K, 9 pages. Second contribution.
- [23] Jiehua Zhu, Xiezhang Li, Yangbo Ye, and Ge Wang, System generated by strip-based projections in discrete tomography, in: *Developments in X-Ray Tomography V*, edited by Ulrich Bonse, Proceedings of SPIE, Volume **6318** (2006), Article ID 63181O, 8 pages. Minor contribution.
- [22] Hengyong Yu, Yangbo Ye, and Ge Wang, Practical cone-beam Lambda tomography, in: *Developments in X-Ray Tomography V*, edited by Ulrich Bonse, Proceedings of SPIE, Volume **6318** (2006), Article ID 63181S, 8 pages. Second contribution.
- [21] Jianya Liu, Yonghui Wang, and Yangbo Ye, A proof of Selberg's orthogonality for automorphic L-functions, *Manuscripta Mathematica*, **118** (2005), 135-149. Equal contribution.
- [20] Jianya Liu and Yangbo Ye, Distribution of zeros of Dirichlet L-functions and the least prime in arithmetic progressions, *Acta Arithmetica*, **119** (2005), 13-38. Equal contribution.
- [19] Jianya Liu and Yangbo Ye, Selberg's orthogonality conjecture for automorphic L-functions, *American Journal of Mathematics*, **127** (2005), 837-849. Equal contribution.
- [18] Jianya Liu and Yangbo Ye, Weighted Selberg orthogonality and uniqueness of factorization of automorphic L-functions, *Forum Mathematicum*, **17** (2005), 493-512. Equal contribution.
- [17] Yangbo Ye, Shiying Zhao, Hengyong Yu, and Ge Wang, A general exact reconstruction for cone-beam CT via backprojection-filtration, *IEEE Transactions on Medical Imaging*, **24** (2005), 1190-1198. Major contribution.
- [16] Hengyong Yu, Yangbo Ye, Shiying Zhao, and Ge Wang, A backprojection-filtration algorithm for nonstandard spiral cone-beam CT with an n-PI-window, *Physics in Medicine and Biology*, **50**(9) (2005), 2099-2111. Second contribution.
- [15] Hengyong Yu, Shiying Zhao, Yangbo Ye, and Ge Wang, Exact BPF and FBP algorithms for nonstandard saddle curves, *Medical Physics*, **32**(11) (2005), 3305-3312. Minor contribution.
- [14] Jiehua Zhu, Shiying Zhao, Yangbo Ye, and Ge Wang, Computed tomography simulation with superquadrics, *Medical Physics*, **32** (2005), 3136-3143. Minor contribution.
- [13] Hengyong Yu, Yangbo Ye, Shiying Zhao, and Ge Wang, A backprojection-filtration algorithm for nonstandard spiral cone-beam CT with an n-PI window, *Physics in Medicine and Biology*, **50** (2005), 2099-2111. Second contribution.
- [12] Yangbo Ye and Ge Wang, A filtered backprojection formula for exact image reconstruction from cone-beam data along a general scanning curve, *Medical Physics*, **32**, January (2005), 42-48. Major contribution.
- [11] Ge Wang, Yinong Liu, Yangbo Ye, Shiying Zhao, Jiang Hsieh, and Shuping Ge, Top-level design and preliminary physical analysis for the first electron-beam micro-CT scanner, *Journal of X-ray Science and Technology*, **12** (2004), 251-260. Minor contribution.
- [10] Jiehua Zhu, Seung Wook Lee, Yangbo Ye, Shiying Zhao, and Ge Wang, X-ray transform and 3D Radon transform for ellipsoids and tetrahedra, *Journal of X-ray Science and Technology*, **12** (2004), 215-229. Minor contribution.
- [9] Yangbo Ye, Jiehua Zhu, and Ge Wang, Geometric studies on variable radius spiral cone-beam scanning, *Medical Physics*, **31** (2004), 1473-1480. Major contribution.

- [8] Yangbo Ye, Shiying Zhao, Hengyong Yu, and Ge Wang, Exact image reconstruction for cone-beam CT along nonstandard spirals and other curves , *Proceedings of SPIE, Developments in X-Ray Tomography IV*, vol. **5535**, 293-300, SPIE Press, August, 2004. Major contribution.
- [7] Jiehua Zhu, Shiying Zhao, Hengyong Yu, Yangbo Ye, Seung Wook Lee, and Ge Wang, Numerical studies on Feldkamp-type and Katsevich-type algorithms for cone-beam scanning along nonstandard spirals, *Proceedings of SPIE, Developments in X-Ray Tomography IV*, vol. **5535**, 558-565, SPIE Press, August, 2004. Minor contribution.
- [6] Hengyong Yu, Yangbo Ye, and Ge Wang, FBP-type reconstruction algorithm for variable radius cone beam CT , *Proceedings of SPIE, Developments in X-Ray Tomography IV*, vol. **5535**, 550-557, August, 2004. Second contribution.
- [5] Yangbo Ye, Jiehua Zhu, and Ge Wang, Minimum detection windows, PI-line existence and uniqueness for helical cone-beam scanning of variable pitch, *Medical Physics*, **31** (3) (2004), 566-572. Major contribution.
- [4] Yangbo Ye, Jiehua Zhu, and Ge Wang, A point-wise limit theorem for filtered backprojection in computed tomography, *Medical Physics*, **30** 2003, 816-822. Major contribution.
- [3] Jianya Liu and Yangbo Ye, Subconvexity for Rankin-Selberg *L*-functions of Maass forms, *Geometric and Functional Analysis*, **12** (2002), 1296-1323. Equal contribution.
- [2] Jianya Liu and Yangbo Ye, Superposition of zeros of distinct *L*-functions, *Forum Mathematicum*, **14** (2002), 419-455. Equal contribution.
- [1] Yangbo Ye, Jiehua Zhu, and Ge Wang, Linear Diophantine equations for discrete tomography, *Journal of X-ray Science and Technology*, **10** (2002), 59-66. Major contribution.

Invited Professional Presentations

- 8/2010, CIMPA-United Nation UNESCO-China Research School 2010: Automorphic forms and L-functions, invited talks.
- 11/2009, Virginia Tech, invited seminar talk, Gel'fand-Graev's reconstruction formula.
- 7/2009, Tsinghua University, invited colloquium talk, medical imaging.
- 3/2009, Shinva Medical, Shandong, China, medical imaging.
- 1/2009, Shandong University, invited colloquium speaker, medical imaging.
- 11/2008, Fudan University, Number Theory Seminar, invited talk.
- 11/2008, Huangguoshu International Interdisciplinary Conference on Biomedical Mathematics Promising Directions in Imaging, Therapy Planning and Inverse Problems, Guizhou, China, invited speaker.
- 11/2008, American Institute of Mathematics, CA, invited penal discussion, Workshop on analytic theory of GL(3) automorphic forms and applications.
- 8/2008, SPIE International Symposium Optical Science and Technology, SPIE's 53th Annual Meeting, San Diego, CA, invited oral presentation.
- 12/2007, Virginia Tech, VA, invited colloquium speaker.
- 11/2007, Georgia Southern University, GA, invited colloquium speaker.
- 11/2007, Purdue University, IN, Number Theory Seminar, invited talk.
- 6/2007, Capital Normal University, Beijing, China, invited colloquium speaker.
- 5/2007, Virginia Tech, VA, invited seminar talk.
- 10/2006, American Institute of Mathematics, CA, invited penal discussion, Workshop on Subconvexity bounds for L-functions.
- 8/2006, China-Japan Seminar on Number Theory, Weihai, China, invited guest speaker.

- 8/2006, Institute of Mathematics, Beijing, China, invited colloquium speaker.
- 5/2006, Université Henri Poincaré, Nancy, France, invited talk.
- 12/2005 Workshop on Number Theory and Applications in Memory of Professor Chengdong Pan, Shandong University, China, invited plenary lecture.
- 10/2005 University of California Los Angeles, Number Theory Seminar, invited talk.
- 8/2005 Iowa State University, invited colloquium speaker.
- 8/2005 Conference in Honor of John Coates in Occasion of His 60th Birthday, Morningside Center of Mathematics, Beijing, China, invited talk.
- 8/2005 International Conference on Analytic Number Theory, Center of Mathematical Sciences at Zhejiang University, Hangzhou, China, invited talk.
- 8/2005 Conference on Arithmetic Geometry and Automorphic Forms, Nankai University, Tianjing, China, invited talk.
- 8/2004 SPIE International Symposium Optical Science and Technology, SPIE's 49th Annual Meeting, Denver, Colorado, oral presentation.
- 7/2004 Annual Meeting of the Chinese mathematical Society on Number Theory and Arithmetic Algebraic Geometry, Chengdu, China, invited talk.
- 7/2004 Institute of Mathematics, Chinese Academy of Sciences, Beijing, China, invited colloquium talk.
- 7/2004 Tsinghua University, Department of Engineering Physics, Beijing, China, invited seminar talk.
- 11/2003 Applied Mathematical and Computational Sciences Seminar, the University of Iowa, invited talk.
- 10/2003 Number Theory Seminar, University of Wisconsin, Madison, invited seminar talk.
- 10/2003 Number Theory Seminar, Johns Hopkins University, Baltimore, invited seminar talk.
- 8/2003 Annual Meeting of the Chinese mathematical Society on Number Theory and Arithmetic Algebraic Geometry, Beidaihe, China, invited talk.
- 8/2002 Satellite Conference on Number Theory and Arithmetic Geometry, International Congress of Mathematicians 2002, Weihai, China, invited plenary speaker.

Journal Editor
- 12/2009-9/2010 Lead Guest Editor, special issue on modern mathematics in medical imaging, International Journal of Biomedical Imaging.
- 1/2008-present, member of the editorial committee, Communications in Mathematical Research, Springer Verlag.

Research Conferences and Workshops Organized
- 10/2009 Main organizer of the Institute of Mathematics and Its Applications Participating Institutions Conference on automorphic forms, representation theory, and number theory.
- 8/2009 Main organizer of the International Conference on Number Theory and Representation Theory, Weihai, China.
- 2/2008-11/2008 Member of the International Scientific Advisory Committee for The Huangguoshu International Interdisciplinary Conference on Biomedical Mathematics Promising Directions in Imaging, Therapy Planning and Inverse Problems, to be held on November 3-9, 2008, The Huangguoshu National Park of China, Guizhou, China.
- 7/2007 Main organizer of UI Department of Mathematics VIGRE Conference on Representation Theory and L-functions.