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My research interests:

Fractal mathematics, rock mechanics and fractional continuous mechanics in fractal media, fractional calculus and its applications, fractional differential equation, local fractional integral equation, local fractional differential equation, local fractional integral transforms, local fractional short-time analysis and wavelet analysis, local fractional functional analysis and its applications, local fractional calculus and its applications.

Affiliation:

Member of the Institute for Chinese Institute of Electronics, 2009 - present;

Member of the Chinese Society of Theoretical and Applied Mechanics, 2010 - present;

The Institute for Fractal Research, Ernst-Ludwig-Ring 2, 61231 Bad Nauheim, Germany, 2012-present,

Life Member of the Chinese Physical Society, 2013 - present.

Member of Editorial boards

Editorial board member of **Mathematical Sciences and Applications E - Notes**, 2011 - present;

Editorial board member of **Advances in Computational Mathematics and its Application**, 2012 - present;

Editorial board member of **American Journal of Mathematical Analysis**, 2013-present;

Editorial board member of **Swiss Journal of Statistical & Applied Mathematics**, 2013-present.

Referee for the following journals

Reviewer member of **International J. Differential Equation**, 2011 - present;

Reviewer member of **International Journal of Nonlinear Science**, 2013-present.

Reviewer member of *QScience Connect*, 2013-present.

Reviewer member of **Information Sciences Letters**, 2013-present.

Reviewer member of **Springer Plus**, 2013-present.

Reviewer member of **Scientific Research and Essays**, 2013-present.

Reviewer member of **British Journal of Mathematics & Computer Science**, 2012-present.
Reviewer member of **Italian Journal of Pure and Applied Mathematics**, 2013-present (EI).
Reviewer member of **Circuits, Systems & Signal Processing**, 2010 - present (SCI).
Reviewer member of **Progress in Applied Mathematics**, 2012 - present (SCI);
Reviewer member of **Applied Mathematics Letter**, 2012 - present (SCI);
Reviewer member of **ASME Journal of Applied Mechanics**, 2012-present (SCI).
Reviewer member of **Abstract and Applied Analysis**, 2012-present (SCI).
Reviewer member of **Central European Journal of Physics**, 2012-present (SCI).
Reviewer member of **The European Physical Journal Special Topics**, 2012-present (SCI).
Reviewer member of **Journal of Applied Mathematics**, 2013-present (SCI).
Reviewer member of **Advances in Difference Equations**, 2013-present (SCI).
Reviewer member of **Mathematical Problems in Engineering**, 2013-present (SCI).
Reviewer member of **AIP Advances**, 2013-present (SCI).
Reviewer member of **Applied Mathematical Modelling**, 2013-present(SCI).
Reviewer member of **International Journal of Theoretical Physics**, 2013-present (SCI).
Reviewer member of **Advances in Mathematical Physics**, 2013-present (SCI).
Reviewer member of **Thermal Science**, 2013-present(SCI).
Reviewer member of **Journal of Inequalities and Applications**, 2013-present. (SCI).
Reviewer member of **Journal of Applied Mathematics and Computing**, 2013-present. (SCI).

Published books:

- [1] **X.-J. Yang**, Local Fractional Functional Analysis and Its Applications, Asian Academic Publisher Limited, HongKong, 2011. (ISBN 978-988-19132-1-0).
- [2] **X. -J. Yang**, Advanced Local Fractional Calculus and Its Applications, World Science Publisher, New York, 2012 (ISBN 978-1-938576-01-0).

Published book chapters:

- [1] M. K. Liao, **X. J. Yang**, Q. Yan, A new viewpoint to Fourier analysis in fractal space, G. A. Anastassiou, O. Duman (Eds), Advances in Applied Mathematics and Approximation Theory, Chapter 26, pp 397-409, Springer, New York, 2013.
- [2] **X.-J. Yang**, D. Baleanu, and J. A. Tenreiro Machado, Application of the local fractional Fourier series to fractal signals, J. A. Tenreiro Machado, D. Baleanu, Luo, Albert C. J. , Discontinuity and Complexity in Nonlinear Physical Systems, Springer, New York, 2014.

Invited Lecturers:

- [1] **X. J. Yang**, Local fractional calculus and its applications, In: Proc. of FDA'12, The 5th IFAC Workshop Fractional Differentiation and its Applications, pp.1-8, 2012.

List of Publications

A- Publications in Science Citation Index Journals

- [1] **X.-J. Yang**, H. M. Srivastava, J. -H. He, D. Baleanu, Cantor-type cylindrical-coordinate method for differential equations with local fractional derivatives, *Physics Letters A*, vol. 377, no.28–30, pp. 1696–1700, 2013.

- [2] **X.-J. Yang**, D. Baleanu, Fractal heat conduction problem solved by local fractional variation iteration method, *Thermal Science*, vol.17, no.2, pp.625-628, 2013.
- [3] **X.-J. Yang**, D. Baleanu, W. P. Zhong, Approximate solutions for diffusion equations on Cantor space-time, *Proceedings of the Romanian Academy, Series A*, vol. 14, no.2, pp.127-133, 2013.
- [4] **X.-J. Yang**, D. Baleanu, and J. A. Tenreiro Machado, Systems of Navier-Stokes equations on Cantor sets, *Mathematical Problems in Engineering*, 2013, Article ID 769724, 2013.
- [5] **X.-J. Yang**, D. Baleanu, J. A. T. Machado, Mathematical aspects of Heisenberg uncertainty principle within local fractional Fourier analysis, *Boundary Value Problems*, 2013, 2013:131.
- [6] M. S. Hu, R. P. Agarwal, **X.-J. Yang**, Local fractional Fourier series with application to wave equation in fractal vibrating string, *Abstract and Applied Analysis*, 2012, Article ID 567401, 2012.
- [7] Y. Z. Zhang, A. M. Yang, **X.-J. Yang**, 1-D heat conduction in a fractal medium: A solution by the local fractional Fourier series method, *Thermal Science*, 2013, vol.17, no.3, 953-956.
- [8] Y. J. Yang, D. Baleanu, **X.-J. Yang**, A local fractional variational iteration method for Laplace equation within local fractional operators, *Abstract and Applied Analysis*, 2013 (2013), Article ID 202650, 6 pages.
- [9] M. S. Hu, D. Baleanu, **X.-J. Yang**, One-phase problems for discontinuous heat transfer in fractal media, *Mathematical Problems in Engineering*, vol.2013, Article ID 358473, 2013.
- [10] W. H. Su, D. Baleanu, **X.-J. Yang** and H. Jafari, "Fractional complex transform method for wave equations on Cantor sets within local fractional differential operator," *Advances in Difference Equations*, vol.2013, no.1, 97-103.
- [11] W. H. Su, D. Baleanu, **X.-J. Yang**, and H. Jafari, Damped wave equation and dissipative wave equation in fractal strings within the local fractional variational iteration method, *Fixed Point Theory and Applications*, vol.2013, no.1, 89-102, 2013.
- [12] A. M. Yang, **X.-J. Yang**, Z. B. Li, Local fractional series expansion method for solving wave and diffusion equations on Cantor sets, *Abstract and Applied Analysis*, vol.2013, Article ID 351057, 2013.
- [13] Y.-J. Yang, D. Baleanu, and **X.-J. Yang**, Analysis of fractal wave equations by local fractional Fourier series method, *Advances in Mathematical Physics*, 2013, Article 632309, 2013.
- [14] X.-J. Ma, H. M. Srivastava, D. Baleanu, **X.-J. Yang**, A new Neumann series method for solving a family of local fractional Fredholm and Volterra integral equations, *Mathematical Problems in Engineering*, 2013, Article ID 325121, 2013.
- [15] Y.-J. Hao, H.M. Srivastava, H. Jafari, **X.-J. Yang**, Helmholtz and Diffusion Equations Associated with Local Fractional Derivative Operators Involving the Cantorian and Cantor-Type Cylindrical Coordinates, *Advances in Mathematical Physics*, 2013, Article ID 754248, 5 pages, 2013.
- [16] Y. Zhao, D. F. Cheng, **X.-J. Yang**, Approximation Solutions for Local Fractional Schrödinger Equation in the One-Dimensional Cantorian System, *Advances in Mathematical Physics*, vol.2013, Article ID 291386, 5 pages, 2013.
- [17] Y. Zhao, D. Baleanu, C. Cattani, D. F. Cheng, **X.-J. Yang**, Maxwell's Equations on Cantor Sets: A Local Fractional Approach, *Advances in High Energy Physics*, 2013 Article ID 686371, 6 pages, 2013.
- [18] Y. Zhao, D. Baleanu, M. C. Baleanu, D. F. Cheng, **X.-J. Yang**, Mappings for special functions on Cantor sets and special integral transforms via local fractional operators, *Abstract and Applied Analysis*, vol.2013, Article ID 316978, 6 pages, 2013.

- [19] A. M. Yang, Z. S. Chen, H. M. Srivastava, **X.-J. Yang**, Application of the Local Fractional Series Expansion Method and the Variational Iteration Method to the Helmholtz Equation Involving Local Fractional Derivative Operators, *Abstract and Applied Analysis*, vol.2013, Article ID 259125, 6 pages, 2013.
- [20] **X.-J. Yang**, D. Baleanu, H. M. Srivastava, and J. A. Tenreiro Machado, On Local Fractional Continuous Wavelet Transform, *Abstract and Applied Analysis*, vol.2013, Article ID 725416, 5 pages, 2013
- [21] Y. Zhao, D. Baleanu, C. Cattani, D. F. Cheng, and **X.-J. Yang**, Local fractional discrete wavelet transform for solving signals on Cantor sets, *Mathematical Problems in Engineering*, 2013, Article ID 560932, 6 pages, 2013.
- [22] A.-M. Yang, C. Cattani, H. Jafari, and **X.-J. Yang**, Analytical Solutions of the One-dimensional Heat Equations Arising in Fractal Transient Conduction with Local Fractional Derivative, *Abstract and Applied Analysis*, vol.2013, Article ID 462535.
- [23] **X.-J. Yang**, D. Baleanu, J.-H. He, Transport equations in fractal porous media within fractional complex transform method, *Proceedings of the Romanian Academy, Series A*, vol. 14, no.4, pp.287-292, 2013.
- [24] **X.-J. Yang**, D. Baleanu, M.P. Lazarević, M.S. Cajić, Fractal boundary value problems for integral and differential equations with local fractional operators, *Thermal Science*, Doi:0354-98361300103Y.
- [25] **X.-J. Yang**, D. Baleanu, Y. Khan, S.T. Mohyud-Din, Local Fractional Variational Iteration Method for Diffusion and Wave Equations on Cantor Sets, *Romanian Journal of Physics*, vol.59, no. 1-2, 2014.

B- Publications in Refereed International Journals

- [1] **X.-J. Yang**, Local fractional integral transforms, *Progress in Nonlinear Science*, 4(2011), 1-225.
- [2] S. T. Mohyud-Din, U. Khan, N. Ahmed, Z. A. Zaidi, S.I. U. Khan, **X.-J. Yang**, Heat transfer analysis in diverging and converging channels, *Nonlinear Science Letters A*, vol.3, no.4, pp.61-79, 2012.
- [3] **X.-J. Yang**, Local fractional partial differential equations with fractal boundary problems, *Advances in Computational Mathematics and its Applications*, 1(1) (2012) 60-63.
- [4] **X.-J. Yang**, Expression of generalized Newton iteration method via generalized local fractional Taylor series, *Advances in Computer Science and its Applications*, 1(2) (2012) 89-92.
- [5] **X.-J. Yang**, Local fractional Fourier analysis, *Advances in Mechanical Engineering and its Applications*, 1(1) (2012) 12-16
- [6] **X.-J. Yang**, Generalized Sampling Theorem for Fractal Signals, *Advances in Digital Multimedia*, 1(2) (2012)88-92
- [7] **X.-J. Yang**, Local Fractional Kernel Transform in Fractal Space and Its Applications, *Advances in Computational Mathematics and its Applications*, 1(2) (2012) 86-93
- [8] **X.-J. Yang**, Local Fractional Integral Equations and Their Applications, *Advances in Computer Science and its Applications*, 1 (4), (2012)234-239
- [9] **X.-J. Yang**, F. R. Zhang, Local Fractional Variational Iteration Method and Its Algorithms, *Advances in Computational Mathematics and its Applications*, 1 (3), (2012)139-145
- [10] **X.-J. Yang**, Y. Zhang, A New Successive Approximation to Non-homogeneous Local Fractional Volterra Equation, *Advances in Information Technology and Management*, 1(3) (2012) 138-141
- [11] **X.-J. Yang**, Picard's Approximation Method for Solving a Class of Local Fractional Volterra Integral Equations, *Advances in Intelligent Transportation Systems*, 1(3) (2012) 67-70.

- [12] **X.-J. Yang**, Heat Transfer in Discontinuous Media, Advances in Mechanical Engineering and its Applications, 1(3) (2012) 47-53.
- [13] **X.-J. Yang**, Generalized Local Fractional Taylor's Formula with Local Fractional Derivative, Journal of Expert Systems, 1(1) (2012) 26-30
- [14] **X.-J. Yang**, Y. Zhang, A New Adomian Decomposition Procedure Scheme for Solving Local Fractional Volterra Integral Equation, Advances in Information Technology and Management, 1 (4) (2012) 158-161.
- [15] **X.-J. Yang**, The Zero-mass Renormalization Group Differential Equations and Limit Cycles in Non-smooth Initial Value Problems, Prespacetime Journal, 3 (9) (2012) 913-923.
- [16] **X.-J. Yang**, Theory and Applications of Local Fractional Fourier Analysis, Advances in Mechanical Engineering and its Applications, 1 (4) (2012) 70-85.
- [17] W. P. Zhong, **X. J. Yang**, F. Gao, A Cauchy problem for some local fractional abstract differential equation with fractal conditions, Journal of Applied Functional Analysis, 8 (1) 92-99, 2013.
- [18] **X.-J. Yang**, D. Baleanu, Local fractional variational iteration method for Fokker-Planck equation on a Cantor set, Acta Universitaria, vol.23, no.2, pp.9-14, 2013.

C- Publications in Refereed International Conference Proceedings

- [1] F. Gao, **X. J. Yang**, Z. X. Kang, Local fractional Newton's method derived from modified local fractional calculus, in: Proc. of the 2th Scientific and Engineering Computing Symposium on Computational Sciences and Optimization, IEEE Computer Society Washington, pp. 228-232, 2009.
- [2] **X. J. Yang**, Z. X. Kang, C. H. Liu, Local fractional Fourier's transform based on the local fractional calculus, In: Proc. of the 2010 International Conference on Electrical and Control Engineering, IEEE Computer Society Washington, Wuhan, China, pp.1242-1245, 2010.
- [3] **X. J. Yang**, F. Gao, Fundamentals of Local Fractional Iteration of the Continuously Nondifferentiable Functions Derived from Local Fractional Calculus, Communications in Computer and Information Science, vol.153, 2011, pp 398-404.
- [4] **X. J. Yang**, Local Fractional Laplace's Transform Based Local Fractional Calculus, Communications in Computer and Information Science, vol.153, 2011, pp 391-397.

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