

Xin Li

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EDUCATION

University of Science and Technology of China, China, Ph.D., Computer Aided Geometric Design, 2008

University of Science and Technology of China, China, B.A., Computational Mathematics, 2002

EMPLOYMENT

Associate Professor, School of Mathematical Science, University of Science and Technology of China, China. 2008-now.

Visiting Scholar, Department of Computer Science, Brigham Young University 2012.07-2012.10.

Visiting Scholar, Department of Computer Science, Nanyang Technological University, Singapore, 2009-2010.

Visiting Scholar, Department of Computer Science, Brigham Young University 2007-2008.

PROFESSIONAL ACTIVITY

- Reviewers for ACM Transactions on Graphics, Computer-Aided Design, Computer Aided Geometric Design, Computer Methods in Applied Mechanics and Engineering, Mathematics of Computation, Visual Computer, Applied Mathematics Letters, SCIENCE CHINA Mathematics, and GMP.
- International conference on information and computational science, Dalian, 2006.
Talk title: "dimension of spline space over 3d hierarchical T-mesh";
- International conference on CAD/Graphics2007, Beijing, Oct. 14-17, 2007.
Talk title: "Surface modeling with polynomial splines over hierarchical T-meshes" and the paper is award as The Best Student Paper Award.
- The 4-th workshop on algebraic geometry and geometric modelling, Lijiang, 2009.
Talk title: "Polynomial splines over T-meshes".
- International conference on CAD/Graphics2009, Huangshan, 2009.
Talk title: "Exact and approximate representations of trimmed surfaces with NURBS and Bézier surfaces" and "Polynomial splines over general T-meshes".
- Invited speaker in 7-th FoCM on workshop of Multiresolution and adaptivity in numerical PDEs.
Talk title: "Analysis-suitable T-spline — a design-through-design technology".
- Invited speaker in The fifth Workshop on Young Chinese Computational Mathematicians.
Talk title: "Analysis-suitable T-splines and IGA".
- The 4-th conference on Computer mathematics, Guangzhou, 2011.
Talk title: "Recent progress on T-splines".
- Invited speaker in the seminar of IGA summer school: IsoGeometric Analysis: a New Paradigm in the Numerical Approximation of PDEs.
Talk title: "On the local refinement for isogeometric analysis representation".
- Invited speaker in the Minisymposia in the 14-th International Conference on Approximation Theory.
Talk title: "Analysis-suitable T-splines".
- Invited speaker in the Minisymposia in the 12-th US congress in the computation mechanics.
Talk title: "Analysis-suitable T-splines: characterization, refineability, and approximation".

- Invited speaker in the Minisymposia in the 4-th Asia-Pacific Association for Computational Mechanics.
Talk title: "Hierarchical Analysis-suitable T-splines".
- Invited speaker in the Minisymposia in the 11-th World Congress on Computational Mechanics.
Talk title: "Semi-structured T-splines".
- Keynote speaker in the Minisymposia in the 18-th International Conference on Finite Elements in Flow Problems.
Talk title: "Trimmed T-splines Conversion".
- Invited speaker in the Minisymposia in the 8-th ICIAM,
Talk title: "Generalizations of T-splines".
- Invited speaker in the Minisymposia in the 12-th European Congress on Computational Methods in Applied Sciences and Engineering.
Talk title: "Semi-analysis-suitable T-splines".
- Invited speaker in the Minisymposia in the 12-th European Congress on Computational Methods in Applied Sciences and Engineering (5-10 June, 2016, Greece).
Talk title: "Semi-analysis-suitable T-splines".
- Invited speaker in the Minisymposia in the 12-th WCCM (24-29, July, 2016, Korea).
Talk title: "Semi-AS T-splines".

HONORS AND AWARDS

- Excellent Doctoral Dissertation Award of China(100 for all the PhD in Chinese University);
- Special Prize of the President Scholarship of Chinese Academy of Sciences (20 for all the PhD in CAS)
- The second Prize for Ministry of education science and technology;
- Excellent member in the Youth Innovation Promotion Association of CAS;

PUBLICATIONS

1. Hongmei Kang, **Xin Li**, Jiansong Deng, Falai Chen. Truncated Hierarchical Loop Subdivision Surfaces and Application in Isogeometric Analysis, Computers and Mathematics with Applications, accepted, 2016.
2. Jingjing Zhang, **Xin Li**, On degree elevation of T-splines, CAGD, Vol 46(2), 16-29, 2016.
3. **Xin Li**, G. T. Finnigan, T. W. Sederberg, G^1 Non-Uniform Catmull-Clark Surfaces, Siggraph2016, accepted.
4. **Xin Li**, Jiansong Deng, On the dimension of splines spaces over T-meshes with smoothing cofactor-conformality method, CAGD, Volume 41, 76-86, 2016.
5. **Xin Li**, Falai Chen, Hongmei Kang, Jiansong Deng, "A survey on the local refinable splines", *SCIENCE CHINA Mathematics*, Vol 59(4), 617-644, 2016.
6. Jingjing Zhang, **Xin Li**, "On the linear independence and partition of unity of arbitrary degree analysis-suitable T-splines", *Communications in Mathematics and Statistics*, Vol 3(3), 353-364, 2015.
7. **Xin Li**, "Some properties for Analysis-suitable T-splines", *Journal of Computational Mathematics*, Vol.33, No.4, 427-440, 2015.
8. Chao Zeng, Fang Deng, **Xin Li**, Jiansong Deng, "Dimensions of biquadratic and bicubic spline spaces over hierarchical T-meshes", *Journal of Computational and Applied Mathematics*, Vol 287, 162-178, 2015.
9. Gang Xu, **Xin Li**, Zhangjin Huang, Meng Wu, Hongwei Lin, "Geometric Computing for Isogeometric Analysis", , *Journal of Computer-Aided Design and Computer Graphics* , 4, 2015.
10. E.J. Evans, M.A. Scott, **Xin. Li**, D.C. Thomas "Hierarchical T-splines: Analysis-suitability, Bézier extraction, and application as an adaptive basis for isogeometric analysis", *Computer Methods in Applied Mechanics and Engineering* Vol. 284, No. 01, pp. 1-20 (2015).

11. **Xin Li**, M.A. Scott. "Analysis-suitable T-splines: characterization, refineability, and approximation", *Mathematical Models and Methods in Applied Sciences*, Vol. 24, No. 06, pp. 1141-1164 (2014).
12. **Xin Li**, Jianmin Zheng. "Interproximate Curve Subdivision", *Journal of computation and applied mathematics*, 244(5), 36-48, 2013.
13. **Xin Li**, Zhangjin Huang, Zhao Liu. "A Geometric approach to Multi-degree spline", *Journal of computer science and technology*, Vol. 27(4): 841-850, 2012.
14. **Xin Li**, Jianmin Zheng. "An alternative method for constructing interpolatory subdivision from approximating subdivision". *CAGD*, Vol 29(7): 474-484, 2012.
15. M. A. Scott, **Xin Li**, T.W.Sederberg, T, Hughes. "Local refinement of Analysis-suitable T-splines," *Computer Methods in Applied Mechanics and Engineering* , Volumes 213-216, 1-3, 206-222, 2012.
16. **Xin Li**, T.W.Sederberg, Jianmin Zheng, T. Hughes, M. A. Scott. "On linear independency of Tsplines blending functions," *Computer Aided Geometric Design* , 29(1): 63-76, 2012.
17. **Xin Li**, Falai Chen. "On the instability in the dimension of splines spaces over T-meshes," *Computer Aided Geometric Design* , 28(7): 420-426, 2011.
18. T. W. Sederberg, Hongwei Lin, **Xin Li**: "Curvature of singular Bzier curves and surfaces," *Computer Aided Geometric Design* , 28(4): 233-244, 2011.
19. **Xin Li**, Jiansong Deng, Falai Chen. "Polynomial splines over general T-meshes". *The Visual Computer* , 277-286, 2010.
20. Hailing Zhou, Jianmin Zheng, **Xin Li**, "Image Reconstruction using Loop Subdivision" In proceedings of Asia Pacific Signal and Information Processing Association, 2010.
21. Haixia Liu, **Xin Li**, "Convergence Analysis and Comparison for Geometric Interval Clipping", *Journal of computer-aided design and computer graphics*, 22(12), 2010.
22. **Xin Li**, Falai Chen. "Exact and approximate representations of trimmed surfaces with NURBS and Bzier surfaces". *CAD/Graphics 2009*. 286-291.
23. **Xin Li**, Jiansong Deng, Falai Chen. "C1 bicubic splines over general T-meshes". *CAD/Graphics 2009*. 92-95.
24. Jiansong Deng, Falai Chen, **Xin Li**, Changqi Hu, Weihua Tong, Zhouwang Yang, Yu-Yu Feng. "Polynomial splines over hierarchical T-meshes". *Graphical Models*, 76-86, 2008.
25. T. W. Sederberg, G. T. Finnigan, **Xin Li**, Hongwei Lin, Heather Ipson. "Watertight trimmed NURBS". *ACM Trans. Graph.*, 2008.
26. **Xin Li**, Jiansong Deng, Falai Chen. "Surface modeling with polynomial splines over hierarchical T-meshes". *The Visual Computer* , 1027-1033, 2007.
27. **Xin Li**, Jiansong Deng, Falai Chen. "Surface Modeling with Polynomial Splines over Hierarchical T-meshes. *CAD/Graphics 2007*. pp.24-24.
28. **Xin Li**, Jiansong Deng, Falai Chen, "Dimensions of Spline Spaces Over 3D Hierarchical T-Meshes", *Journal of Information and Computational Science*, Vol.3, No.3, 487-501, 2006.
29. **Xin Li**, Jiansong Deng, and Chendong Xu, "Visualization of Piecewise Algebraic Surfaces", *Journal of University of Science and Technology of China*, Vol.36, No.9, 960-967, 2006.
30. Zhangjin Huang, Jiansong Deng, **Xin Li**, "Dimensions of spline space over general T-meshes", *Journal of University of Science and Technology of China*, Vol.36, No.6, 573-581, 2006.