TING LIN, PH.D. CANDIDATE

🏛 Peking University

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EDUCATION

2021 – NOW	◇	**Ph.D.** , School of Mathematical Sciences, Peking University.
2017 – 2021	◇	**B.Sc.** ,School of Mathematical Sciences, Peking University.
2018 – 2021	◇	**B.Econ.**, National School of Development, Peking University.

ACADEMIC EXPERIENCES

09/2023 – 01/2024	◇	Visiting Student, National University of Singapore, Singapore.
07/2019 – 08/2019	◇	Visiting Student, National University of Singapore, Singapore.

PUBLICATIONS

Journal Articles

[1] Jingpu Cheng, Qianxiao Li, **Ting Lin**, and Zuowei Shen. "Interpolation, Approximation and Controllability of Deep Neural Networks". In: *SIAM Journal on Control and Optimization* (2024), to appear.

[2] Jun Hu, Yizhou Liang, and **Ting Lin**. "Finite Element Grad grad Complexes and Elasticity Complexes on Cuboid Meshes". In: *Journal of Scientific Computing* 99.50 (2024).

[3] Jun Hu, **Ting Lin**, and Qingyu Wu. "Local C^r interpolation operators on simplicial triangulations in any dimension". In: *Computers and Mathematics with Applications* 154 (2024), pp. 153–161.

[4] Kaibo Hu, **Ting Lin**, and Qian Zhang. "Distributional Hessian and divdiv complexes on triangulation and cohomology". In: *SIAM Journal on Applied Algebra and Geometry* (2024).

[5] Qianxiao Li, **Ting Lin**, and Zuowei Shen. "Deep Neural Network Approximation of Invariant Functions through Dynamical Systems". In: *Journal of Machine Learning Research* 25.278 (2024).

[6] Jun Hu, **Ting Lin**, and Qingyu Wu. "A Construction of C^r Conforming Finite Element Spaces in Any Dimension". In: *Foundations of Computational Mathematics* (2023), published online.

[7] Qianxiao Li, **Ting Lin**, and Zuowei Shen. "Deep Learning via Dynamical Systems: An Approximation Perspective". In: *Journal of the European Mathematical Society* 25.5 (2023), pp. 1671–1709.

Preprints

[8] Bin Dong, **Ting Lin**, Peichu Xie, and Zuowei Shen. "Analysis of a wavelet frame based two-scale model for enhanced edges". In: (2024).

[9] Jun Hu, **Ting Lin**, Qingyu Wu, and Beihui Yuan. "The condition for constructing a finite element from a superspline". In: (2024).

[10] Snorre Christiansen, Kaibo Hu, and **Ting Lin**. "Extended Regge complex for linearized Riemann-Cartan geometry and cohomology". In: (2023).

[11] Kaibo Hu, **Ting Lin**, and Bowen Shi. "Finite elements for symmetric and traceless tensors in three dimensions". In: (2023).

[12]   Qianxiao Li, **Ting Lin**, and Zuowei Shen. "On the Universal Approximation Property of Deep Fully Convolutional Neural Networks". In: (2022).

SELECTED AWARDS

2025	◇	Young Elite Scientists Sponsorship Program for PhD Students, China Association for Science and Technology
2023	◇	East Asia SIAM Best Paper Award, 1st Prize.
2022	◇	BICMR Mathematical Award for Graduate Students, Peking University.
2021-2023	◇	Principal Scholarship, Peking University.
2021	◇	Weiming Scholarship (Outstanding Undergraduate Researchers), Peking University.
2018	◇	National Scholarship, Peking University.

TALKS

01/2025	◇	Invited talk, School of Mathematics, Zhejiang University.
12/2024	◇	Invited talk, Visual Computing and Learning Lab, Peking University.
10/2024	◇	Invited talk, Numerical Analysis Group, Mathematical Institute, University of Oxford, UK.
	◇	Invited talk, AGATE, School of Mathematics, University of Edinbrugh, UK.
09/2024	◇	Minisymposium talk, WCCM-2024, Vancouver, Canada. (Online)
08/2024	◇	Workshop talk on Jingjinji+ Annual Conference on Computational Mathematics, Hohhot, Inner Mongolia.
07/2024	◇	Invited talk, CUHK-Shenzhen, Shenzhen, China.
06/2024	◇	Minisymposium talk, CMAM-10 Annual Meeting, Bonn, Germany.
04/2024	◇	Invited talk, Xiangtan University, Xiangtan.
03/2024	◇	Invited talk, Chinese Academy of Sciences, Bejing, China.
01/2024	◇	Workshop talk, IMS Young Mathematical Scientists Forum — Applied Mathematics, National University of Singapore, Singapore.
11/2023	◇	Invited talk, National University of Singapore, Singapore.
09/2023	◇	Invited talk, AMPhD Seminar, Fudan University, Shanghai.
08/2023	◇	Workshop talk on Jingjinji+ Annual Conference on Computational Mathematics, Taiyuan, Shanxi.
	◇	Minisymposium talk on *Non-standard finite element methods*, ICIAM 2023, Tokyo, Japan.
11/2022	◇	Minisymposium talk on *New Developments in Non-standard Finite Elements*, CSIAM 2022, Virtual.
10/2022	◇	Workshop talk, The 8th PKU Workshop on Numerical Methods for PDEs, Peking University.

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