

Associate Professor YANG, LEI

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Academic Qualification

Ph.D in Computational Mathematics, HKUST

B. Sc in Computational Mathematics, SiChuan University

Teaching Area

Calculus

Linear Algebra

Probability and Statistics

Numerical Methods

Operational Researchs

Research Area

Numerical Methods

Numerical PDEs

Machine Learning

Data Analysis

Working Experience

2014- present, Assistant Professor/ Associate Professor, School of Computer Science and Engineering, MUST

2008 - 2012, Lecturer/ RA/ MSC Program Administrator, HKBU

Academic Publication (selected)

P. Li, L. Yang, J. Lan, R. Du and J. Chen, A Second-Order Semi-Implicit Method for the Inertial Landau-Lifshitz-Gilbert Equation, Numer. Math. Theor. Meth. Appl., 2022.

C. Yao, Z. Du and L. Yang, SAV Finite Element Method for the Peng-Robinson Equation of State with Dynamic Boundary Conditions, Adv. Appl. Math. Mech., 2022.

L. Yang, J. Chen, and G. Hu, A framework of the finite element solution of the Landau-Lifshitz-Gilbert equation on tetrahedral meshes, Journal of Computational Physics, Vol. 431, 110142, 2021.

L. Yang, F. Liu and W. Yang, FETD Study of the Wave Propagation in Chiral Metamaterials, Advances in Applied Mathematics and Mechanics, Vol. 13, No. 1, pp. 191-202, 2021.

J. Chen, Z. Sun, Y. Wang and L. Yang, A Spin-Wave Solution to the Landau-Lifshitz-Gilbert Equation, Communications in Mathematical Sciences, Vol. 19, No. 1, pp. 193-204, 2021.

L. Yang, F. Liu and W. Yang, FETD Study of the Wave Propagation in Chiral Metamaterials, Advances in Applied Mathematics and Mechanics, Vol. 13, No. 1, pp. 191-202, 2021.

L. Yang, F. Liu and W. Yang, FETD Study of the Wave Propagation in Chiral Metamaterials, Advances in Applied Mathematics and Mechanics, Vol. 13, No. 1, pp. 191-202, 2021.

L. Zheng, L. Yang, Y. Liang, A Modified Spectral Gradient Projection Method for Solving Non-linear Monotone Equations with Convex Constraints and Its Application, IEEE Access, 92677-92686, Vol. 8, 2020.

L. Zheng, L. Yang, Y. Liang, A conjugate gradient projection method for solving equations with convex constraints, *Journal of Computational and Applied Mathematics*, 112781, Vol. 375, 2020.

J. Chen, L. Yang, X.P. Wang, A reduced model for domain wall dynamics in soft ferromagnets, *Journal of Magnetism and Magnetic Materials*, 199-203, Vol. 479, 2019.

L. Yang, G. Hu, An adaptive finite element solver for demagnetization field calculation, *Adv. Appl. Math. Mech.*, Vol. 11, No. 5, pp. 1048-1063, 2019.

X. Liang, L. Yang, S. Luo, Facial Expression Recognition Based on Gabor Multi-Orientation Feature Fusion, 3rd International Conference on Machine Vision and Information Technology (CMVIT 2019)

L. Yang, Pinning Effect on Current-Induced Domain Wall Motion in Nanostrip, *EAJAM*, 837-851, Vol. 7, No. 4, 2017.

Y. Liu; D. Zhang; X. Guo; M. Zhong; M. Gao; L. Yang; L. Ni, RSS-based Ranging by Leveraging Frequency Diversity to Distinguish the Multiple Radio Paths, *IEEE Transactions on Mobile Computing*, 1121-1135, Vol. 16, No. 4, 2017.

W. Yang, D.L. Wang, L. Yang, A stable numerical method for space fractional Landau-Lifshitz equations, *Applied Mathematics Letters*, 149–155, Volume 61, 2016.

L. Yang and X.P. Wang, Dynamics of domain wall in thin film driven by spin current, *Discrete and Continuous Dynamical Systems Series B*, Vol. 14, No. 3, 2010.

Professional Certification and Awards

BOC Research Excellence Award, Macau University of Science and Technology, 2021

MUST Teaching Achievement Award, Macau University of Science and Technology, 2021
MUST Cloud Classroom Teaching Excellence Award, Macau University of Science and Technology, 2020

MUST Teaching Achievement Award, Macau University of Science and Technology, 2020

Student Awards

Second Prize , “HUAWEI Cup” 18th China Post-Graduate Mathematical Contest in Modeling, 2021

Bronze Award, Artificial Intelligence Innovation Competition, 2018

Professional Society Membership

Member of CSIAM

Member of MSIAM