Curriculum Vitae

Xiang Lv

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Personal Information

Professor of Mathematics
Mathematics & Science College
Shanghai Normal University
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Major Professional Interests

Random Dynamical Systems, Stochastic Differential Equations and Related Applications

Education

- 09/2003–06/2007, B.S., School of Mathematics and Computer Science, Anhui Normal University

  Dissertation: Research about boundary value problem for second order ordinary differential equations

  Adviser: Prof. Shiping Lu

- 09/2007–06/2010, M.S., School of Mathematics and Computer Science, Anhui Normal University

  Dissertation: Existence and global attractivity of positive periodic solutions for two kinds of Lotka-Volterra systems with deviating arguments

  Adviser: Prof. Shiping Lu and Prof. Ping Yan

- 09/2010–06/2013, Ph.D., Mathematics & Science College, Shanghai Normal University

  Dissertation: Existence of homoclinic orbits for second order Hamiltonian systems

  Adviser: Prof. Jifa Jiang

Employment

- 09/2023–present, Professor of Mathematics, Shanghai Normal University, Shanghai, P.R.China
- 09/2018–08/2023, Associate Professor of Mathematics, Shanghai Normal University, Shanghai, P.R.China
- 07/2013–08/2018, Assistant Professor of Mathematics, Shanghai Normal University, Shanghai, P.R.China

Honors and Awards

- Excellent Master Dissertation of Anhui Province, 2011
- National Scholarship, Mathematics & Science College, Shanghai Normal University, 2013
- Excellent Doctoral Dissertation of Shanghai, 2014

Research Support

- 01/2020-12/2023, Stationarity and Stability of Stochastic Functional Differential Equations, No.11971316, Natural Science Foundation of China
- 07/2019-06/2022, Stability of Stochastic Functional Differential Equations, No.19ZR1437100, Natural Science Foundation of Shanghai
- 01/2016-12/2018, Research on Homoclinic Orbits of Second Order Hamiltonian Systems with Indefinite Symmetric Matrix, No.11501369, Natural Science Foundation of China
- 01/2015-12/2017, Critical Point Theory and Dynamical Behavior of Hamiltonian Systems, No.14CG43 (Chen Guang Project), Shanghai Municipal Education Commission
- 07/2014-06/2017, Homoclinic Orbits of Hamiltonian Systems and Related Problems, No.14YF1409100 (Sailing Program), Science and Technology Commission of Shanghai Municipality

Publications

- Global stability of stationary solutions for a class of semilinear stochastic functional differential equations with additive white noise. J. Differential Equations 367 (2023), 890-921. (with Jifa Jiang)

- Analysis of a microfluidic chemostat model with random dilution ratios. Stoch. Dyn. 22 (2022), no. 8, Paper No. 2240035, 23 pp. (with Jifa Jiang)
- A new approach to stability analysis for stochastic Hopfield neural networks with time delays. IEEE Trans. Automat. Control 67 (2022), no. 10, 5278-5288.
- Existence of unstable stationary solutions for nonlinear stochastic differential equations with additive white noise. Discrete Contin. Dyn. Syst. Ser. B 27 (2022), no. 4, 2313-2323.
- Stability analysis of semilinear stochastic differential equations. Statist. Probab. Lett. 180 (2022), Paper No. 109257, 6 pp.
- Existence of homoclinic solutions for a class of second-order Hamiltonian systems with locally subquadratic potentials. Qual. Theory Dyn. Syst. 19 (2020), no. 1, Paper No. 7, 7 pp.
- Existence of periodic solutions for a class of second-order p-Laplacian systems. Appl. Math. Comput. 338 (2018), 515-519.
- Global stability of feedback systems with multiplicative noise on the nonnegative orthant. SIAM J. Control Optim. 56 (2018), no. 3, 2218-2247. (with Jifa Jiang)
- Homoclinic solutions for a class of second-order Hamiltonian systems with locally defined potentials. Electron. J. Differential Equations 2017, Paper No. 205, 7 pp.
- A small-gain theorem for nonlinear stochastic systems with inputs and outputs I: additive white noise. SIAM J. Control Optim. 54 (2016), no. 5, 2383-2402. (with Jifa Jiang)
- Infinitely many homoclinic solutions for a class of subquadratic second-order Hamiltonian systems. Appl. Math. Comput. 290 (2016), 298-306.
- Homoclinic orbits for a class of second-order Hamiltonian systems without a coercive potential. J. Appl. Math. Comput. 39 (2012), no. 1-2, 121-130. (with Shiping Lu)
- Homoclinic solutions for ordinary p-Laplacian systems. Appl. Math. Comput. 218 (2012), no. 9, 5682-5692. (with Shiping Lu)
- Existence of homoclinic solutions for a class of second-order Hamiltonian systems with general potentials. Nonlinear Anal. Real World Appl. 13 (2012), no. 3, 1152-1158. (with Jifa Jiang)
- Homoclinic solutions for a class of second-order Hamiltonian systems. Nonlinear Anal. Real World Appl. 13 (2012), no. 1, 176-185. (with Jifa Jiang and Shiping Lu)

- Periodic solutions of non-autonomous ordinary p-Laplacian systems. J. Appl. Math. Comput. 35 (2011), no. 1-2, 11-18. (with Shiping Lu and Ping Yan)
- Anti-periodic solutions for a class of nonlinear second-order Rayleigh equations with delays. Commun. Nonlinear Sci. Numer. Simul. 15 (2010), no. 11, 3593-3598. (with Daojin Liu and Ping Yan)
- Existence and global attractivity of positive periodic solutions of competitor-competitor-mutualist Lotka-Volterra systems with deviating arguments. Math. Comput. Modelling 51 (2010), no. 5-6, 823-832. (with Shiping Lu and Ping Yan)
- Homoclinic solutions for nonautonomous second-order Hamiltonian systems with a coercive potential. Nonlinear Anal. 72 (2010), no. 7-8, 3484-3490. (with Shiping Lu and Ping Yan)
- Existence of homoclinic solutions for a class of second-order Hamiltonian systems. Nonlinear Anal. 72 (2010), no. 1, 390-398. (with Shiping Lu and Ping Yan)
- Existence and global attractivity of positive periodic solutions of Lotka-Volterra predator-prey systems with deviating arguments. Nonlinear Anal. Real World Appl. 11 (2010), no. 1, 574-583. (with Shiping Lu and Ping Yan)

Partial List of Courses Taught

- Calculus I, II, Shanghai Normal University
- Ordinary Differential Equations, Shanghai Normal University
- Real Analysis, Shanghai Normal University
- Advanced Theory of Probability, Shanghai Normal University
- Stochastic Differential Equations, Shanghai Normal University

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Partial List of Conferences and Talks

- Seminar on Infinite Dimensional Random Dynamical Systems, Northwest Normal University, Lanhzou, June 13-17, 2024
- The 14th International Conference on Recent Advances in Applied Dynamical Systems, Xinyang Normal University, Xinyang, May 30-June 2, 2024
- The 5th International Conference on Biomathematical Modelling and Stochastic Analysis, Huaiyin Normal University, Huaian, April 18-21, 2024

- Seminar on Ordinary Differential Equations and Dynamical Systems, Sun Yat-sen University Zhuhai Campus, Zhuhai, November 17-19, 2023
- Guangxi Normal University, Guilin, October 20-22, 2023
- The 10th International Congress on Industrial and Applied Mathematics, Waseda University, Tokyo, August 20-25, 2023
- Brazil-China Symposium on Applied and Computational Mathematics, Foz do Iguacu, July 15-24, 2023
- Seminar on Random Dynamical Systems, University of Science and Technology of China, Hefei, July 1-4, 2023
- Seminar on Differential Equations and Dynamical Systems, Changsha University of Science & Technology, Changsha, April 21-23, 2023
- Huazhong University of Science and Technology, Wuhan, July 21-25, 2021
- The 3rd International Conference on Biomathematical Modelling and Stochastic Analysis, Lanzhou University of Technology, Lanzhou, April 23-25, 2021
- The 2nd International Conference on Biomathematical Modelling and Stochastic Analysis, Huaiyin Normal University, Huaian, October 31-November 3, 2019
- Seminar on Random Dynamical Systems, Shandong Technology and Business University, Yantai, October 25-27, 2019
- Northeast Normal University, Changchun, September 16-19, 2019
- The 12th Conference on Stability Theory and Application of Differential Equations, Shanxi University, Taiyuan, August 13-15, 2019
- South China University of Technology, Guangzhou, July 9-11,2019
- The 13th International Conference on Recent Advances in Applied Dynamical Systems, Hangzhou Normal University, Hangzhou, June 14-16, 2019
- Seminar on Ordinary Differential Equations and Dynamical Systems, Sun Yat-sen University Zhuhai Campus, Zhuhai, November 16-18, 2018
- The 16th Annual Meeting of China Society for Industrial and Applied Mathematics, Chengdu, September 14-16, 2018
- The 6th G. J. Butler International Conference on Differential Equations and Population Biology, University of Alberta, Edmonton, July 15-30, 2018
- The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, National Taiwan University, Taipei, July 5-9, 2018

- The 12th International Conference on Recent Advances in Applied Dynamical Systems, Chongqing Normal University, Chongqing, June 8-10, 2018
- Harbin Institute of Technology, Harbin, October 25-26, 2017
- The 15th Annual Meeting of China Society for Industrial and Applied Mathematics, Ocean University of China, Qingdao, October 13-15, 2017
- The 5th International Conference on Random Dynamical Systems, Huazhong University of Science and Technology, Wuhan, June 23-27, 2017
- Anhui Normal University, Wuhu, June 16-17, 2017
- Nanjing University of Information Science and Technology, Nanjing, June 14-15, 2017
- The 11th International Conference on Recent Advances in Applied Dynamical Systems, Xi'an Jiaotong University, Xi'an, June 8-11, 2017
- National Tsing Hua University, Hsinchu, December, 2016
- The 11th AIMS conference on Dynamical Systems, Differential Equations and Applications, Orlando, July 1-5, 2016
- The 10th International Conference on Recent Advances in Applied Dynamical Systems, Jiangsu Normal University, Xuzhou, June 10-12, 2016
- Summer School on Stochastic Dynamics, Chinese Academy of Science, Beijing, August1-4, 2015

Professional Memberships

- American Mathematical Society (AMS), Math Reviewer