

XILIN LUO

● Political: CPC member

● University: Sichuan Univ.

● Education: Ph.D.

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EDUCATION

Sichuan University | Management Science and Engineering | **Ph.D. in Management** (Supervisor: Research Fellow Jin Xiao) (2021.09-Present)

GPA: 3.53/4.0 (top 15%); Core courses: Advanced Microeconomics | Multilevel Statistical Analysis | Computational Intelligence, etc.

National and Kapodistrian University of Athens | Business Administration | Visiting Study (Supervisor: Prof. Dimitrios Thomakos) (2024.09-2025.09)

Research Interests: Time-series modeling and forecasting | Forecasting model security (robustness/adversarial risk/uncertainty)

Chongqing University of Posts and Telecommunications | System Science | M.Sc. in Science (Supervisor: Prof. Huiming Duan) (2018.09-2021.06)

GPA: 3.69/4.0 (top 15%); Core courses: Data Analysis and Statistical Forecasting | Decision Theory and Support | Big Data Computing, etc.

Southwest University of Science and Technology | Industrial Engineering | B.Eng. (2013.09-2017.06)

GPA: 3.62/4.0 (top 20%); Core courses: Operations Research | Basic Industrial Engineering | Facility Planning and Logistics Analysis, etc.

ACADEMIC ACHIEVEMENTS

Research Areas: Energy forecasting | Forecasting model security | Energy threshold management | Time-series modeling | Grey prediction model theory

Academic Profile: 10 SCI papers; 4 papers in TOP journals as first/second author (with supervisor as first author or corresponding author); 1 ESI highly cited paper; 342 total citations; H-index: 7.

Representative works:

- [1] **Xilin Luo**, Huiming Duan, Leiyuhang He. A novel Riccati equation grey model and its application in forecasting clean energy[J]. *Energy*, 2020, 205:118085. Doi: 10.1016/j.energy.2020.118085. (SCI Q1 | **TOP journal**)
- [2] **Xilin Luo**, Huiming Duan, Yuhang Tian, Jin Xiao. Robustness enhancement of grey prediction models in energy consumption based on adversarial training[J]. *Applied Soft Computing*, 2026, 194:114902. Doi: 10.1016/j.asoc.2026.114902. (SCI Q2 | **TOP journal**)
- [3] **Xilin Luo**, Huiming Duan, Kai Xu. A novel grey model based on traditional Richards model and its application in COVID-19[J]. *Chaos, Solitons & Fractals*, 2021, 142:110480. Doi: 10.1016/j.chaos.2020.110480. (SCI Q1 | **TOP journal**)
- [4] Huiming Duan, **Xilin Luo**. A novel multivariable grey prediction model and its application in forecasting of coal consumption[J]. *ISA Transactions*, 2022, 120:110-127. Doi: 10.1016/j.isatra.2021.03.024. (SCI Q1 | **TOP journal** | **ESI highly cited paper**)
- [5] Zhongyi Wang, **Xilin Luo**, Fang Wang, Jin Xiao, Zhaorong Huang, Lean Yu. Collaborative forecasting of electric load based on a personalized federated decomposition ensemble method[J]. *Chinese Journal of Management Science*, 2026. (NSFC Department of Management Sciences Grade-A important journal; accepted)

Manuscript Under Review:

- [1] Jin Xiao, **Xilin Luo**, Yuhang Tian, Dimitrios Thomakos, Yadong Wang, Lean Yu, Shouyang Wang. Security assessment of energy forecasting models under grey-box selective transfer ensemble attacks[J]. *Nature Communications*, 2026. (under revision)

Project Experience:

- [1] National Ten Thousand Talents Plan Project for Leading Talents in Philosophy and Social Sciences: Research on effectively preventing and resolving major economic and financial risks; core researcher.
- [2] National Natural Science Foundation of China Project: Security of credit-card fraud detection models based on intelligent black-box attacks; core researcher.
- [3] National Natural Science Foundation of China Project: Grey prediction modeling of traffic flow and intelligent signal control under a 5G Internet of Vehicles environment; core researcher (ranked 7th).
- [4] Chongqing Social Science Planning Project: Machine-learning-based grey prediction models and their applications in intelligent transportation; core researcher (ranked 2nd).
- [5] Chongqing Natural Science Foundation General Program: Data-driven grey prediction modeling of short-term road traffic flow; core researcher (ranked 4th).

Academic Service:

Anonymous Reviewer: Chaos, Solitons & Fractals | Scientific Reports | ISA Transactions, etc.
Completed 30+ manuscript reviews.

Competition Experience:

‘Huawei Cup’ 16th China Graduate Mathematical Contest in Modeling | National Second Prize | Team Leader
‘Zhongqing Cup’ 3rd National College Student Mathematical Modeling Competition | National Second Prize

STUDENT WORK

Deputy Secretary, Party Branch for Doctoral Students | Business School, Sichuan University (2021.09-2025.06) Coordinated branch activities and study arrangements; managed Party membership dues and standardized account records; promoted compliant and efficient branch operations.

Head, Academic Department of the Graduate Student Union | Chongqing University of Posts and Telecommunications (2018.09-2019.06) Planned and organized graduate academic forums; coordinated guest liaison, on-site support, and risk response to ensure timely delivery.

Organization Committee Member, Graduate Party Branch | School of Science, Chongqing University of Posts and Telecommunications (2018.09-2021.06) Organized branch meetings and activities; completed dues collection and information statistics; supported implementation of branch affairs.

President, Student Union | School of Manufacturing Science and Engineering, Southwest University of Science and Technology (2015.09-2016.06) Coordinated large college- and university-level events such as New Year galas and sports meetings; aligned cross-school/department resources and emergency plans.

AWARDS & HONORS

National Scholarship for Graduate Students (National level)

China Scholarship Council Scholarship for Government-Sponsored Overseas Study (National level)

Chongqing Merit Student (Provincial level)

Sichuan Province College Student Comprehensive Quality Grade-A Certificate (Provincial level)

Chongqing Advanced Individual in Scientific and Technological Innovation (Provincial level)

SKILLS & CERTIFICATES

Language Skills: English CET-6 | CET-4

Software Skills: Python | MATLAB | Origin | CAD | Flexsim (simulation modeling)

Certificate: Trainee Industrial Engineer