



Dr. Gao Song

Department of Digital and Intelligent Technology | Professor

Biography

Dr Gao Song, originally from Hubei Province, is a Professor at Xi'an Technological University and holds a doctoral degree. Dr Gao graduated from the former Huazhong University of Science and Technology ("HUST") with a bachelor's degree and from Northwestern Polytechnical University with master's and doctoral degrees. Dr Gao has also served as a Visiting Scientist at the University of Windsor in Canada. Dr Gao's main research interests include artificial intelligence, intelligent control, target recognition, multi-sensor information fusion and complex networks. Dr Gao has served as Principal Investigator or participated in more than 20 research projects, including projects funded by the National Natural Science Foundation of China, national defence-related projects, and provincial and municipal research projects, and has been granted four national invention patents. Dr Gao has published two academic monographs, including one funded by a national defence science and technology fund, and one textbook, as well as more than 70 academic papers, many of which have been indexed by leading international databases. With a long-standing career in teaching and research, Dr Gao has achieved significant results in the fields of unmanned systems and adaptive control.

Professional Qualifications

Engineering Education Accreditation Expert, China Engineering Education Accreditation Association

Employment History, including Postdoctoral Appointments

- Jul 1988 – Aug 1992 Faculty Member, Xi'an Technological University
- Apr 1995 – Sep 2007 Faculty Member, Xi'an Technological University
- Oct 2007 – Sep 2008 Visiting Scientist, University of Windsor, Canada
- Oct 2008 – Present Faculty Member, Xi'an Technological University

Education

- Sep 1984 – Jul 1988 Bachelor's Degree, former Huazhong University of Science and Technology
- Sep 1992 – Apr 1995 Master's Degree, Northwestern Polytechnical University
- Sep 2004 – Aug 2011 Doctoral Degree (Research areas: Detection Technology and Instruments; Control Theory and Applications; Control Science and Engineering), Northwestern Polytechnical University

Research Interests

Artificial intelligence, intelligent control, target recognition, multi-sensor information fusion, autonomous control and complex networks.

Teaching

Academic special-topic project teaching and dissertation supervision.

Social Service

Council Member of the Chinese Institute of Command and Control; Executive Council Member of the Shaanxi Provincial Association of Automation; Member of the Process Control Professional Committee of the Chinese Association of Automation; Member of the Intelligent Weaponry Equipment Technology Professional Committee of the China Ordnance Society; Review Expert for the National Science and Technology Awards; National Science and Technology Expert for the Ministry of Science and Technology; Review Expert for the Talent Programmes of the Ministry of Education; Engineering Education Accreditation Expert for the Ministry of Education; Member of the Shaanxi Provincial Graduate Education and Teaching Steering Committee; General Chair of the 2019 China Intelligent Control and Automation Equipment Conference (“CICAE 2019”); Programme Committee Chair of the 2022 IEEE International Conference on Mechanical and Electronics Engineering (“ICMEE 2022”); and Editorial Board Member for journals including the *Journal of Gun Launch & Control* and the *Journal of Xi'an Technological University*.

Research Achievements

Publications

Selected recent publications are as follows:

- [1] Kun Yan, Hongtian Chen, Chaobo Chen, Song Gao. Time-varying Gain Extended State Observer-based Adaptive Optimal Control for Disturbed Unmanned Helicopter, ISA Transactions, 2024.02
- [2] Yang Hengzhan, Gao Song*, Qian Fucui, Huang Jiaoru. A suboptimal dual control method for the stochastic systems with parameters drifting, Asian Journal of Control, 2019,

Vol.21(1):609-616.

[3] Jiaoru Huang, Guo Xie, Song Gao*, Fucan Qian. Adaptive H_∞ Observer-Based Sliding Mode Control for Uncertain Fractional-Order Nonlinear Systems, IEEJ Transactions on Electrical and Electronic Engineering, 2023, 18(7):1127-1135.

[4] Kai Cao, Yangquan Chen, Yunbo Wei, Zhi Liu, Chaobo Chen, Song Gao. *Multi-robot Collaborative Perception and Capture Based on Variational Sparse Gaussian Process*. Acta Automatica Sinica, 2025, 51(4): 778–791.

Books and Book Chapters

[1] *Intelligent Information Processing and Applications of Dynamic Bayesian Network*, National Defense Industry Press, September 2019

[2] *Optimal Control Theory and Applications: Solution and Implementation Based on MATLAB*, Xi'an Jiaotong University Press, June 2023