**加拿大工程院专家简历**

**首页部分**

1. **Photos（The photo must be high-definition of the journal in hand）**

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1. **Marital status:** Married.
2. **Office Address:** No.111 Jiulong Road, Hefei 230601, Anhui, China.
3. **Website:（Link to profile）https://ai.ahu.edu.cn/2023/0302/c19545a301777/page.htm**

**正文部分**

1. **EDUCATION**

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| --- | --- |
| **Sichuan University** | Chengdu, China |
| Bachelor of Science, Applied Mathematics | Sep. 1992 - Jul. 1996 |
| **Southeast University** | Nanjing, China |
| Master of Engineering, Control Science and Engineering | Sep. 1999 - Mar. 2001 |
| **Southeast University** | Nanjing, China |
| Doctor of Engineering, Control Science and Engineering | Mar. 2001 - Nov. 2003 |

1. **DISTINCTIONS AND AWARDS**

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| **Second Prize of National Natural Science Award** |
| * Guo Lei, Sun Changyin, Wu Huaining, Li Tao Rank 2 |
| * Research on modeling, analysis and control theory of multi-source interference systems, 2013-Z-107-2-05-R02, 2013 |
| **First Prize of Natural Science Award of the Ministry of Education** |
| * Sun Changyin, He Wei, Li Zhijun, He Xiuyu Rank 1 |
| * Intelligent control theory and method of autonomous unmanned systems with limited motion, First Prize of the Natural Science Award of the Ministry of Education, 2020-033-R01, 2020. |
| **First Prize of Scientific Progress Award of Chinese Society of Automation** |
| * Sun Changyin, Pan Jing, Li Xinde, Dong Lu , Niu Dan, Wang Teng, Xue Lei Rank 1 |
| * Key technologies and applications of complex positioning and navigation control of mobile medical service robots, Chinese Society of Automation, First Prize for Scientific Progress, 2020-J-1-003-R-01, 2020 |
| **First Prize of Natural Science of Chinese Society of Automation** |
| * Sun Changyin, He Wei, Li Zhijun, Yu Yao, Song Ruizhuo Rank 1 |
| * Intelligent control theory and method of autonomous moving bodies, Chinese Society of Automation, First Prize in Natural Science, 2017-Z-1-004, 2017 |
| **First Prize of Chinese Society of Automation, Chinese Society of Astronautics, the 5th Yang Jiachi Science and Technology Award** |
| * Sun Changyin Rank 1 |

1. **EXPERIENCE**

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| --- | --- |
| **Anhui University** | Hefei, China |
| * Anhui University, Vice President, Professor, Doctoral Supervisor, Director of the Engineering Center of the Ministry of Education for Autonomous Unmanned Systems Technology | Feb.2022 - Current |
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| **Southeast University** | Nanjing, China |
| * School of Automation, Southeast University, professor, doctoral supervisor, second-level professor (since 2012), director of the Academic Committee (since 2019), chief professor (since 2021), director of the Learning Machine Research Center (since 2018) | Mar.2007 - Jan.2021 |
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| **University of Science and Technology Beijing** | Beijing, China |
| * Dean of School of Automation, University of Science and Technology Beijing | Mar.2012 - Nov.2016 |
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| **University of Southern California** | Los Angeles, America |
| * Senior Research Scholar | Jul.2011 - Jan.2012 |
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| **Royal Melbourne Institute of Technology, Australia** | Melbourne, Australia |
| * Visiting professor | Jan.2011 - Feb.2011 |
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| **National Natural Science Foundation of China** | Department of Information Science |
| * Project Director | Jun.2007 - Aug.2009 |
| **Chinese University of Hong Kong** | Hongkong, China |
| * Postdoctoral researcher, associate researcher | Mar.2004 - Dec.2004 |
|  |
| **Hohai University** | Nanjing, China |
| * School of Electrical Engineering, Hohai University, Associate Professor (2004.04), Professor (2006.04) | Dec.2003- Mar.2007 |
|  |
| **China Three Gorges University** | Yichang, China |
| * College of Science, China Three Gorges University, Teaching assistant | Jul.1996 – Sep.1999 |
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1. **OTHER PROFESSIONAL ACTIVITIES**

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| --- | --- |
| **Member** |  |
| Institute of Electrical and Electronics Engineer | Senior member |
| Chinese Association of Automation | Fellow |
| Chinese Association of Artificial Intelligence | Fellow |
| **Invited Speaker** |  |
| Artificial Intelligence Large Model Technology Summit Forum (2023) | Invited speech |
| The 9th TCCT Special Conference on Stochastic Systems and Control（2021） | Invited speech |
| China Automation Conference (2021) | Invited speech |
| National Intelligent Industry Summit (2019) | Invited speech |
| China Intelligent Automation Conference (2018) | Conference speech |
| China Automation Conference (2018) | Invited speech |
| Annual Youth Academic Conference of Chinese Society of Automation (2016) | Conference speech |
| China Automation Conference and the 100th anniversary of Qian Xuesen’s birth and the 50th anniversary of the Chinese Society of Automation (2011) | Invited speech |
| The First International Symposium on "Intelligent Science and Intelligent Data Engineering" (2010) | Invited speech |
| **Head, Co-Chairman** |  |
| Chinese Association of Automation (Executive Director, Secretary-General Deputy) | 2016 - current |
| Chinese Association for Artificial Intelligence (Executive Director) | 2017 - current |
| Artificial Intelligence and Robot Education Committee of Chinese Association of Automation (Director of the Committee) | 2020 - current |
| Youth Working Committee of Chinese Association of Automation (Director of the Committee) | 2014 - 2019 |
| **Member of Editorial Board for the journals** |  |
| 《IEEE Transactions on Neural Networks and Learning Systems》(Associate Editor) | 2010 - current |
| 《IEEE Transactions on Intelligent Vehicles》(Associate Editor) | 2022 - current |
| 《IEEE/CAA Journal of Automatica Sinica》(Associate Editor) | 2014 - current |
| 《Neural Processing Letters》(Associate Editor) | 2008 - current |
| 《Control Theory and Applications》(Associate Editor) | 2013 - current |
| 《CAAI Transactions Intelligence Technology》(Associate Editor) | 2016 - current |
| 《Acta Automatica Sinica》(Deputy Editor-in-Chief) | 2021 - current |
| 《Chinese Journal of Intelligent Science and Technology》(Deputy Editor-in-Chief) | 2022 - current |

1. **EDITOR:**

None

1. **GRANTS:**

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| --- | --- |
| **Theory on Brain-Inspired Online Learning With Neuro-Plasticity** | 2023-2027 |
| National Natural Science Foundation of China Joint Fund Key Project (￥2,890,000) | Principal Applicant |
| **Theory and Application of Cooperative Control of Autonomous Unmanned System** | 2020-2024 |
| National Natural Science Foundation of China Innovative Research Group Project (￥10,500,000) | Principal Applicant |
| **Human-in-the-loop Hybrid Augmented Intelligence** | 2019-2022 |
| National Key Research and Development Program of China (￥8,930,000) | Principal Applicant |
| **Research Report on Development Strategy of Automation Discipline (2021-2025)** | 2019-2020 |
| National Natural Science Foundation of China Special Project (￥160,000) | Principal Applicant |
| **Intelligent Systems and Aircraft Control** | 2012-2015 |
| National Natural Science Foundation of China Distinguished Young Scientists Fund Project (￥2,400,000) | Principal Applicant |
| **Multi-agent Event-driven Distributed Optimal Control** | 2016-2020 |
| Frontier Leading Basic Project of Jiangsu Province (￥2,940,000) | Principal Applicant |
| **Multi-source Information Perception Fusion and Intelligent Control Technology Foundation** | 2020-2022 |
| National Natural Science Foundation of China Joint Fund Key Project (￥5,000,000) | Principal Applicant |
| **Theory and Method of Intelligent Collaborative Control of Robot Swarm** | 2018-2021 |
| National Natural Science Foundation of China Joint Fund Key Project (￥3,000,000) | Principal Applicant |
| **Research on Intelligent Autonomous Control of Near Space Hypersonic Vehicle** | 2011-2014 |
| National Natural Science Foundation of China Joint Fund Key Project (￥3,100,000) | Principal Applicant |
| **National Ten Thousand People Program Special Support Program Project** | 2018-2020 |
| Central Talent Leading Group (￥800,000) | Principal Applicant |

1. **HEAD OF APPLIED PROJECTS:**

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| --- | --- |
| **Yuan Xin** | Doctor degree |
| 《Optimal control for constrained­input systems with reinforcement learning》 | Dec. 2021 |
| **Li Xiaofeng** | Doctor degree |
| 《Reinforcement learning based optimal control scheme for non-linear switching systems》 | Dec. 2021 |
| **Liu Wenzhang** | Doctor degree |
| 《Multi-agent transfer reinforcement learning with efficient exploration》 | Jun. 2022 |
| **Wang Le** | Doctor degree |
| 《Scheduling of privacy protection for remote state estimation in cyber-physical systems》 | Jun. 2022 |
| **Ren Lu** | Doctor degree |
| 《Research on the cluster synchronization control of multi-agent systems》 | Jun. 2021 |
| **Su Yanxu** | Doctor degree |
| 《Distributed model predictive control and optimization for constrained systems》 | Jun. 2021 |
| **Ouyang Yuncheng** | Doctor degree |
| 《Intelligent control for several constrained systems》 | Jun. 2022 |
| **Xiong Ailing** | Master degree |
| 《Research on autonomous navigation method of unmanned surface vehicle in complex dynamic environment》 | Jun. 2022 |
| **Fan Shujuan** | Master degree |
| 《Cross-view localization based on self-attention》 | Jun. 2022 |

1. **PUBLICATIONS:**

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| **Books:** |
| * Sun, Changyin; Yu, Yao. Robust Control for Strict-Feedback for Nonlinear Systems and Its Application, *Science Press*, 2014. |
| * Sun Changyin; Mu Chaoxu; Zhang Ruimin. Terminal Sliding Mode Control Technology of Hypersonic Vehicle, *Science Press*, 2013. |
| **Copyright certificates, patients:** |
| * Sun Changyin; Zheng Nanning; Wang Yuanda. A Mobile Robot Navigation and Control Method Based on Intelligent Components. *ZL201910920606.X*, 2022 |
| * Sun Changyin; He Zichen; Dong Lu; Chen Qijun; Wang Jiawei. Navigation Control System and Method for Assisted Mobile Robot Based on Learning Component Library. *ZL202010522452.1*, 2021. |
| * Sun Changyin; Wang Yuanda; Sun Jia; Liu Jian. An Anti-Wave Interference Control Method for Unmanned Boats Based on Deep Reinforcement Learning. *ZL202010895943.0*, 2022 |
| * Sun Changyin; Wu Qiaoyun; Ren Lu. A Dynamic Obstacle Avoidance Method Based on Real-Time Construction of Local Grid Maps. *ZL202210284948.9*, 2022 |
| * Sun Changyin; Wu Qiaoyun; Su Yanxu. A Hierarchical and Modular Learning Navigation and Obstacle Avoidance Method, *ZL202210247108.5*, 2022 |
| **Articles and papers in English peer-reviewed journals and edited volumes:** |
| * Sun Changyin; Liu Wenzhang; Dong Lu; Reinforcement Learning With Task Decomposition for Cooperative Multiagent Systems. *IEEE Transactions on Neural Networks and Learning Systems*, 2021, 32(5): 2054-2065. |
| * Sun Changyin; He Wei; Hong Jie. Neural Network Control of a Flexible Robotic Manipulator Using the Lumped Spring-Mass Model. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2017, 47(8): 1863-1874. |
| * Sun Changyin; Li Xiaofeng; Sun Yuewen. A Parallel Framework of Adaptive Dynamic Programming Algorithm With Off-Policy Learning. *IEEE Transactions on Neural Networks and Learning Systems*, 2021, 32(8): 3578-3587. |
| * Sun Changyin; He Wei; Ge Weiliang; Chang Cheng. Adaptive Neural Network Control of Biped Robots. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, 2017, 47(2): 315-326. |
| * Liu Feng; Xiang Tao; Hospedales Timothy M; Yang Wankou; Sun Changyin\*. Inverse Visual Question Answering: A New Benchmark and VQA Diagnosis Tool. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2020, 42(2): 460-474. |
| * Peng Lianghong; Shi Ling; Cao Xianghui; Sun Changyin\*. Optimal Attack Energy Allocation against Remote State Estimation. *IEEE Transactions on Automatic Control*, 2018, 63(7): 2199-2205. |
| **Articles and papers in Chinese peer-reviewed journals and edited volumes:** |
| * Sun Changyin; Mu Chaoxu. Important Scientific Problems of Multi-Agent Deep Reinforcement Learning. *Acta Automatica Sinica*, 2020, 46(7): 1301−1312. |
| （孙长银; 穆朝絮. 多智能体深度强化学习的若干关键科学问题[J]. *自动化学报*, 2020, 46(7): 1301-1312.） |
| * Sun Changyin; Mu Chaoxu; Yu Yao. Some Control Problems for Near Space Hypersonic Vehicles. A*cta Automatica Sinica*, 2013, 39(11): 1901−1913. |
| （孙长银; 穆朝絮; 余瑶. 近空间高超声速飞行器控制的几个科学问题研究[J]. *自动化学报*, 2013, 39(11): 1901-1913.） |

1. **Courses taught in 2017-2022:**

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| **Graduate courses** |  |
| Control Systems CAD (MS00811) | 2017-2022 |
| Nonlinear Control System (DB008101) | 2017-2022 |
| Nonlinear Systems Analysis and Control (MS008132) | 2017-2022 |
| **Undergraduate course** |  |
| Leadership Literacy (B0800090, Seminar) | 2017-2022 |

**Email: cysun@ahu.edu.cn & cysun@seu.edu.cn**