

Miao Keyan

University College, University of Oxford, OX1 4BH

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"To harden the mind."

Education

Degree DPhil. Univeristy of Oxford

Oxford, UK

DEPARTMENT OF ENGINEERING SCIENCE: CONTROL GROUP

2021.09 - 2025.04

- Supervised by Dr. Konstantinos Gatsis
- Funded by EPSRC & Univeristy of Oxford (Oxford-Ashton Memorial Graduate Scholarship)

Degree M.S. Imperial College London

London, UK

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING: CONTROL SYSTEMS

2019.09 - 2020.09

- Award: Outstanding Achievement: Control Systems MSc & Hertha Ayrton Centenary Prize(Best Project)
- Overall GPA: 83.02/100 Graduation Project: 84.90/100 Distinction
- Ranking: 1/29
- Publication: Miao, Keyan, and Richard Vinter. "Optimal control of a growth/consumption model." Optimal Control Applications and Methods 42.6 (2021): 1672-1688.
- Main Courses: Pattern Recognition, Game Theory, Design of Linear Multivariable System, Optimization, System Identification, Discrete-time System and Computer Control

Degree B.E. Northwestern Polytechnical University (Project 985, 211)

Xi'an, Shaanxi

CONTROL ENGINEERING

2015.09 - 2019.06

- Award: Outstanding Graduation Thesis
- Overall GPA: 89.8/100 Major GPA: 92.88/100 Graduation Project: 96.8/100
- Ranking: 2/58
- Main Courses: Automatic Control Theory, Modern Control Theory, Digital Electronic Technology, Analog Electronic Technology, C Programming Language, Data Structure

Research and Project Experience

Master's Graduation Project - Optimal Control and Economics: Consumption Versus Investment

London, UK

Investment

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING, IMPERIAL COLLEGE LONDON

2020.05 - 2020.09

- Publication: Miao, Keyan, and Richard Vinter. "Optimal control of a growth/consumption model." Optimal Control Applications and Methods 42.6 (2021): 1672-1688.
- Learned the analytical methods for solving optimal control problems (Pontryakin Maximum Principle, bang-bang principle, Dynamic Programming)
- Discussed the "consumption-investment" problem by using the Maximum Principle and Dynamic Programming
- Interpreted the optimal solution derived by optimal control theory in terms of economics and verified some economic conclusions by using optimal control theory

Undergraduate Graduation Project - Research on Dehaze Methods Based on Visible Light Images (Outstanding Graduation Thesis)

Xi'an, Shaanxi

DEPARTMENT OF ASTRONAUTICS, NORTHWESTERN POLYTECHNICAL UNIVERSITY

2019.02 - 2019.06

- Implemented image defogging by using dark channel prior (DCP) algorithm with C++ language
- Improved the DCP algorithm by adding thresholds, transforming the color space, and using Gamma correction
- Discussed a machine learning method of image dehazing using convolutional neural network (CNN-Dehaze) and its neural network architecture
- Analyzed the effects of various defogging algorithms from qualitative and quantitative perspectives, and completed the video defogging

Honors & Awards

INTERNATIONAL

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| 2021 | Research Student Ship & Oxford-Ashton Memorial Graduate Scholarship , 2021 - 2025 University of Oxford | Oxford, UK |
| 2020 | Prize for Outstanding Achievement in the Control Systems Master of Science , 2019 - 2020 Department of Electrical and Electronic Engineering, Imperial College London | London, UK |
| 2020 | Hertha Ayrton Centenary Prize (Best Project) , 2019 - 2020 Department of Electrical and Electronic Engineering, Imperial College London | London, UK |

DOMESTIC

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|------|--|----------------|
| 2019 | Outstanding Graduation Thesis , Northwestern Polytechnical University | Xi'an, Shaanxi |
| 2018 | First Prize Scholarship , Northwestern Polytechnical University | Xi'an, Shaanxi |
| 2017 | Provincial Second Prize (String Quintets <Spring>) , The 5th China Undergraduate Art Exhibition | Xi'an, Shaanxi |

Extracurricular Activity

Hertford College Music Society - Orchestra

Oxford, UK

MEMBER / VIOLINIST

2022.09 - now

- Participated in concerts

Symphony Orchestra of Northwestern Polytechnical University

Xi'an, Shaanxi

ASSISTANT CONCERTMASTER

2015.09 - 2019.06

- Organized and participated in many on-campus concerts

Northwestern Polytechnical University Model United Nations

Xi'an, Shaanxi

MEMBER

2016.12 - 2017.03