

## PERSONAL DETAILS

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Australian Centre for Field Robotics  
University of Sydney  
NSW, Australia, 2008

## EDUCATIONAL BACKGROUND

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**Australian Centre for Field Robotics, University of Sydney** 2022-2023

*Postgraduate visiting student*

Supervisor: Professor Guodong Shi

**Academy of Mathematics and Systems Science, Chinese Academy of Sciences** 2018-now

*Phd candidate in Operational Research and Cybernetics*

Supervisor: Professor Yiguang Hong

**University of Chinese Academy of Sciences** 2014-2018

*B.Sc in Mathematics and Applied Mathematics*

## RESEARCH INTEREST

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Riemannian optimization

Differential geometry

Online optimization

Game theory

Learning theory

## PUBLICATIONS

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- **Wang, Xi**, Zhipeng Tu, Yiguang Hong, Yingyi Wu, and Guodong Shi\*. "Online Optimization over Riemannian Manifolds." *Journal of Machine Learning Research* 24, no. 84 (2023): 1-67.
- **Wang, Xi**, Zhipeng Tu, Yiguang Hong\*, Yingyi Wu, and Guodong Shi. "No-regret Online Learning over Riemannian Manifolds." *Advances in Neural Information Processing Systems* 34 (2021): 28323-28335.
- **Wang, Xi**, Deming Yuan, Yiguang Hong, Zihao Hu, Lei Wang and Guodong Shi\* "Riemannian Optimistic Algorithms." Under Review.
- Tu, Zhipeng, **Xi Wang**, Yiguang Hong, Lei Wang, Deming Yuan, and Guodong Shi. "Distributed Online Convex Optimization with Compressed Communication." *Advances in Neural Information Processing Systems* 35 (2022): 34492-34504.

## SCHOLARSHIP AND AWARDS

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**CSC Postgraduate Research Visiting Scholarship**

2022-2023

*China Scholarship Council, 22000 AUD per annum*

**The Chinese Academy of Sciences Presidential Award** 2023  
*Chinese Academy of Sciences, 10000 CNY*

**”Sci. & Edu. Collaborative Program” Scholarship** 2017  
*Chinese Academy of Sciences, 3000 CNY*

## **CONFERENCES AND PRESENTATIONS**

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- “Distributed Online Convex Optimization with Compressed Communication,” The 36th conference on Neural Information Processing Systems (NeurIPS) , New Orleans, USA, November 2022.
- “No-regret Online Learning over Riemannian Manifolds,” The 35th conference on Neural Information Processing Systems (NeurIPS), Virtually, December 2021.
- “A Gradient-based Online Optimization Method on Riemannian Manifold,” The 40th Chinese Control Conference, Shanghai, China, July 2021.
- “ Learning Algorithm Design based on Manifold Optimization,” 2020 China Automation Congress, Shanghai, China, June 2020.

## **TEACHING EXPERIENCE**

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**Casual Academic** Feb. 2023 – Jun. 2023  
*School of Aerospace, Mechanical and Mechatronic, University of Sydney*  
AMME 3500 System Dynamics and Control (Professor Guodong Shi)

**Teaching Assistant** Sep. 2020 – Jan. 2021  
*School of Mathematical Sciences, University of Chinese Academy of Sciences*  
B0111002Y Complex Analysis (Professor Shaoji Feng)