# Rongbing Xu

PhD Student · University of Waterloo

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## Education

**University of Waterloo** — *Waterloo, ON, Canada*

Ph.D. in Systems Design Engineering (Aeronautics) — *2024-Present*

- Advisor: Dr. Shi Cao

**University of Waterloo** — *Waterloo, ON, Canada*

M.A.Sc. in Systems Design Engineering — *2019-2022*

- Advisor: Dr. Shi Cao

**University of New Mexico** — *Albuquerque, NM, USA*

B.Sc. in Computer Science — *2016-2019*

- Minors in Mathematics

## Professional Experience

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|---|---|
| 2024-present | **Graduate Teaching Assistant**, University of Waterloo |
| 2022-2024 | **Research Assistant**, University of Waterloo |
| 2019-2022 | **Graduate Teaching Assistant**, University of Waterloo |

## Publications

### Published

Rongbing Xu, Shi Cao, Suzanne K. Kearns, Ewa Niechwiej-Szwedo, and Elizabeth Irving. 2024. Computational cognitive modeling of pilot performance in pre-flight and take-off procedures. Journal of Aviation/Aerospace Education & Research, 33(4), 2.

Rongbing Xu, Shi Cao. 2021. Modeling pilot flight performance in a cognitive architecture: model demonstration. Proceedings of the Human Factors and Ergonomics Society Annual Meeting. Vol. 65. No. 1.

### Master Thesis

Rongbing Xu. 2022. Modeling pilot flight performance on pre-flight and take-off tasks with a cognitive architecture. UWSpace. http://hdl.handle.net/10012/18174

## Awards, Fellowships, & Grants

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| 2020-2022 | **Engineering Excellence Master's Fellowship**, University of Waterloo | *$ 36,000* |
| 2016-2019 | **International Amigo Scholarship**, University of New Mexico | *$ 48,000* |

## Presentations

### Contributed Presentations

Shi Cao, Ewa Niechwiej-Szwedo, Elizabeth Irving, John Munoz, and Rongbing Xu. 2023. Data Platform and Information Technologies Transforming General Aviation Pilot Training. Poster: Sustainable Aeronautics Summit 2023.

Rongbing Xu. 2022. Modeling Pilot Flight Performance on Take-off Task with QN-ACTR. Oral presentation: Virtual MathPsych/ICCM 2022.

Rongbing Xu. 2022. Modeling Pilot Flight Performance in a Cognitive Architecture. Departmental seminar: Department of Systems Design Engineering, University of Waterloo.

Rongbing Xu and Shi Cao. 2021. Modeling Pilot Flight Performance in a Cognitive Architecture: Model Demonstration. Oral presentation: Human Factors and Ergonomics Society 65th Annual Meeting.

## Teaching Experience

Fall 2024 **Cognitive Ergonomics**, Teaching Assistant, University of Waterloo
Winter 2021 **Data Structures and Algorithms**, Teaching Assistant, University of Waterloo
Fall 2021 **Elementary Engineering Mathematics**, Teaching Assistant, University of Waterloo
Spring 2021 **Data Structures and Algorithms**, Teaching Assistant, University of Waterloo
Winter 2021 **Optimization and Numerical Methods**, Teaching Assistant, University of Waterloo
Fall 2020 **Data Structures and Algorithms**, Teaching Assistant, University of Waterloo

## Research Experience

**University of Waterloo - Waterloo Institute of Sustainable Aeronautics** *Waterloo, ON, Canada*
Advisor: Dr. Shi Cao *2022 - Present*
- Project: "Data Platform and Information Technologies Transforming General Aviation Pilot Training"

**Mitacs** *Waterloo, ON, Canada*
Advisor: Dr. Shi Cao *2021*
- Project: "Operator Space Situation Awareness in Space Object Tracking Tasks"

**University of Waterloo - Department of System Design Engineering** *Waterloo, ON, Canada*
Advisor: Dr. Shi Cao *2019-2022*
- Thesis: "Modeling Pilot Flight Performance on Pre-flight and Take-off Tasks with A Cognitive Architecture"

## Outreach & Professional Development

### Peer Review

One journal I review for
IEEE Transactions on Human-Machine Systems