

Rongbing Xu

RESEARCH ASSOCIATE · SYSTEMS DESIGN ENGINEERING

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Education

University of Waterloo

M.A.Sc IN SYSTEMS DESIGN ENGINEERING

- Advisor: Dr. Shi Cao

Waterloo, ON, Canada

2019-2022

University of New Mexico

B.S. IN COMPUTER SCIENCE

- Minors in Mathematics

Albuquerque, NM, USA

2016-2019

Professional Experience

2022-2024 **Research Assistant**, University of Waterloo

2019-2022 **Graduate Teaching Assistant**, University of Waterloo

Publications

PUBLISHED

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.

ACCEPTED

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.

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

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 Math-Psych/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

- 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