

# Ruipeng Liu

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Personal Page: <https://emiliolrp.github.io/>

## EDUCATION

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<b>Syracuse University</b> Ph.D Candidate in Computer/Information Science and Engineering Advisor: Garrett Katz	Syracuse, New York, USA <i>Sept 2022 – Expected May 2027</i>
<b>Syracuse University</b> Master of Science in Computer Science	Syracuse, New York, USA <i>Sept 2020 – May 2022</i>
<b>Dalhousie University</b> Student Exchange Program	Halifax, Nova Scotia, Canada <i>Sept 2016 – Jan 2017</i>
<b>Hong Kong Baptist University</b> Bachelor of Science (Hons.) in Computer Science	Hong Kong SAR, China <i>Sept 2014 – Jun 2018</i>

## PUBLICATIONS

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### Published

1. **R. Liu**, Q. Qiu, S. Khan, and G. E. Katz, “Linearithmic clean-up for vector-symbolic key-value memory with kroneker rotation products,” in *19th International Conference on Neurosymbolic Learning and Reasoning*, ser. Proceedings of Machine Learning Research, vol. 284. PMLR, 08–10 Sep 2025, pp. 1107–1118, link: <https://proceedings.mlr.press/v284/liu25b.html>
2. **R. Liu**, B. He, N. Tahir, and G. E. Katz, “On the feasibility of single-pass full-capacity learning in linear threshold neurons with binary input vectors”, *41st International Conference on Machine Learning*, ser. Proceedings of Machine Learning Research, vol. 235, PMLR, 21–27 Jul 2024, pp. 31 119–31 130., link: <https://proceedings.mlr.press/v235/liu24x.html>
3. X. Chen, **R. Liu**, Z. Gan, and G. E. Katz, “Lipschitz-regularized critic leads to policy robustness against transition dynamics uncertainty,” in *39th Florida Artificial Intelligence Research Society*, 2026, preprint: <https://arxiv.org/abs/2404.13879>

## TEACHING

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- **Teaching Assistant** Syracuse University
  - CIS675: Design and Analysis of Algorithms (Graduate Level) (*Fall 2022*)
  - CIS667: Introduction to Artificial Intelligence (Graduate Level) (*Fall 2023*)
  - CIS477: Introduction to Analysis of Algorithms (Undergraduate Level) (*Spring 2023, Fall 2024 - Spring 2026*)

## SCHOLARSHIPS AND AWARDS

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- Professional, Academic, and Creative Work (PAC) Travel Grant: 600 USD 2025
- 19th International Conference on Neurosymbolic Learning and Reasoning (NeSy) Travel grant: 1000 USD 2025

## SKILLS

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- **Programming languages:** Python, Java (proficiency), shell(intermediate)
- **Software & Tools:** Pytorch, OpenAI Gymnasium, Numpy, Matplotlib, Latex, Linux, SSH
- **Frameworks:** Springboot, Flask

## LANGUAGES

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- **Chinese(Mandarin):** Native proficiency
- **English:** Full professional proficiency