

# Bang-Shien Chen

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## EDUCATION

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### PhD. in Electrical and Computer Engineering

*Sep 2025 - Present*

Northeastern University

GPA: 4.0/4.0

Research Advisor: Prof. David M. Rosen

### M.Sc. in Mathematics

*Sep 2023 - Jun 2025*

National Taiwan Normal University

GPA: 4.3/4.3

Research Advisor: Prof. Jann-Long Chern

Co-Advisor: Prof. Chih-Wei Huang

### B.Sc. in Mathematics

*Sep 2018 - Jun 2022*

National Taiwan Normal University

GPA: 3.18/4.3

## ACADEMIC EXPERIENCE

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**Research Visitor** hosted by Prof. Shuzhong Zhang, University of Minnesota.

*Jun 2024 - Aug 2024*

**Teaching Assistant** of Linear Algebra by Prof. Chu-Chin Hu.

*Sep 2023 - Jun 2024*

**Research Assistant** of Prof. Jann-Long Chern.

*Jul 2022 - Jan 2023, May 2023 - Aug 2023*

## AWARDS & ACHIEVEMENTS

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### Draper Scholar | [link](#)

*Sep 2025 - Present*

A scholarship designed to transform exceptional students into innovative professionals by integrating thesis research with hands-on experience.

### NCTS Research Abroad Program | [link](#)

*Jul 2024 - Aug 2024*

A research abroad program financially supported by the Mathematics Division of National Center of Theoretical Sciences, worked with Prof. Shuzhong Zhang at the University of Minnesota.

### Taiwan-Japan Joint Workshop, Presentation Award | [link](#)

*Feb 2024*

Out of 40 speakers in the 14th Taiwan-Japan Joint Workshop for Young Scholars in Applied Mathematics.

### IBM Qiskit Hackathon Taiwan, 1st Prize | [link](#)

*Jul 2022*

Out of 12 teams in the final round of the Hackathon.

### Taiwan-Japan Joint Workshop, Presentation Award | [link](#)

*Feb 2022*

Out of 42 speakers in the 12th Taiwan-Japan Joint Workshop for Young Scholars in Applied Mathematics.

## PRESENTATION & PUBLICATION

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### Presentations

1. Workshop on Advances in Continuous Optimization 2024, RIKEN Center for Advanced Intelligence Project, Tokyo, Japan, November 25-26, 2024.
2. 2024 NCTS Student Workshop on Scientific Computing, National Taiwan University, Taipei, Taiwan, May 6, 2024.
3. 14th Taiwan-Japan Joint Workshop for Young Scholars in Applied Mathematics, Meiji University, Tokyo, Japan, February 27-29, 2024.
4. Workshop on Advances in Continuous Optimization 2023, The University of Tokyo, Tokyo, Japan, July 24-25, 2023.
5. 2022 Summer school on Quantum Computer, Asia University, Taipei, Taiwan, August 21 - September 24, 2022.
6. Seminar on Quantum Theory and Computation, National Taiwan Normal University, Taipei, Taiwan, April 26 - May 24, 2022.
7. 12th Taiwan-Japan Joint Workshop for Young Scholars in Applied Mathematics, (virtual), February 28 - March 1, 2022.

### Publications

- [1] Y.-J. Li, Y.-K. Lin, **B.-S. Chen**, C.-W. Huang, J.-L. Chern, C.-C. Sun. (2026). *Open-Vocabulary Semantic Segmentation for Dynamic 3D Scenes Using Scene Flow Estimation*. IEEE Robotics and Automation Letters, 11(7), 8140-8147, doi: [10.1109/LRA.2026.3693993](https://doi.org/10.1109/LRA.2026.3693993).
- [2] **B.-S. Chen**, Y.-K. Lin, J.-Y. Chen, C.-W. Huang, J.-L. Chern, C.-C. Sun. (2024). *FracGM: A Fast Fractional Programming Technique for Geman-McClure Robust Estimator*. IEEE Robotics and Automation Letters, 9(12), 11666-11673, doi: [10.1109/LRA.2024.3495372](https://doi.org/10.1109/LRA.2024.3495372).
- [3] **B.-S. Chen**, J.-L. Chern. (2022). *Generating quantum feature maps for SVM classifier*. [arXiv:2207.11449](https://arxiv.org/abs/2207.11449).

## SKILLS

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**Research:** Optimization, Robotics, Computer Vision, Machine Learning

**Programming:** Python, C++, Matlab

**Languages:** TOEFL: 109, GRE: 320