

# Tan Jun Wei

Website: [tanjunwei03.github.io](https://tanjunwei03.github.io)

Email: [tanjunwei03@gmail.com](mailto:tanjunwei03@gmail.com)

Orcid: 0000-0003-0505-0157

## Education

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- **NUS High School of Mathematics & Science Diploma (High Distinction)** 2017-2022  
*Mathematics & Physics Honours, Chemistry Major* CAP: 4.6
- **National University of Singapore** 2022  
*PC2174A Mathematical Methods in Physics* Grade: A

## Achievements

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- International Young Physicists Tournament Champion Team 2019
- International Physics Olympiad Silver Medal 2022
- National Training Team, International Young Physicists Tournament 2020  
*(Note that the national team was never formed due to COVID-19)*
- International Olympiad for Astronomy and Astrophysics Bronze Medal 2021
- European Physics Olympiad Bronze 2020
- Singapore Physics Olympiad Gold Medal 2022
- Online Physics Olympiad Gold, 2nd place 2021
- Online Physics Brawl Category A Champion 2021
- Singapore Science and Engineering Fair Gold Medal 2022
- Singapore Physics League Champions 2022
- Singapore Physics League Champions 2021
- Singapore Junior Physics Olympiad Gold Medal 2020
- Singapore Junior Physics Olympiad Top in Waves and Oscillations 2020
- Singapore Junior Physics Olympiad Gold Medal 2019
- Singapore Junior Physics Olympiad Gold Medal 2018
- Singapore Young Physicists Tournament Champions 2021
- Singapore Young Physicists Tournament Silver 2020
- Singapore Young Physicists Tournament Silver 2019
- Australian Informatics Olympiad Silver 2019
- Singapore Astronomy Olympiad Top Silver 2021
- Singapore Astronomy Olympiad Bronze 2019

## Professional Activities

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- **Astronomy Club, NUS High School**

President

2021

*In this position, I took an organisational role in the day to day functions of the Club, streamlining sessions while promoting the study of astronomy.*

- **Singapore Physics League Organising Team**

Data Analyst

2023

*In this role, I actively developed our capabilities of catching cheating teams from scratch, researching, analysing and advancing known research such as those listed in Lan (2014) and Wang (2020) applying maximum likelihood estimators, bayesian inference and variational analysis, modifying and assimilating them to the unique context of the Singapore Physics League.*

Problem Setter

2023

*In this role, I set and reviewed physics problems for talented students of ages from 13 to 18.*

## Research

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### Papers

- [1] R. Yang, J. W. Tan, T. Tai, J. M. Koh, L. Li, S. Longhi, and C. H. Lee, “Designing non-hermitian real spectra through electrostatics,” *Science Bulletin*, vol. 67, no. 18, pp. 1865–1873, 2022.

### Conference Participation

- Institute of Physics Singapore Meeting Poster Presentation

2022

### Projects in Progress

- Non-Hermitian generalization of the percolation problem
- Non-Hermitian Skin Effect in Moire Bilayer Lattices