# Peter Tsun Ho Pang

#### **Research** interest

Gravitational-wave data analysis and astrophysics Multi-messenger astronomy

#### **Professional experience**

| 2023 - Pres. | Postdoctoral Researcher | Utrecht University |
|--------------|-------------------------|--------------------|
| 2022 - 2023  | Data Scientist          | ABN AMRO Bank N.V. |

# Education

| 2018 - 2022 | Ph.D. in Physics                              | Utrecht University                  |
|-------------|---|-------------------------------------|
|             | Supervisor: Prof. Dr. Chris VAN DEN BROECK    |                                     |
| 2016 - 2018 | M.Phil. in Physics                            | The Chinese University of Hong Kong |
|             | Supervisor: Prof. Dr. Tjonnie G. F. Li        |                                     |
| 2012 - 2016 | <b>B.Sc.</b> in Physics – First class honours | The Chinese University of Hong Kong |
|             |   |                                     |

## Fellowships and grants

| 2025 - 2027 | Croucher Postdoctoral Fellowship | 165k USD     | PI        | Offer declined |
|-------------|----------------------------------|--------------|-----------|----------------|
| 2024 - 2027 | NWO Veni Fellowship              | 315k EUR     | PI        |                |
| 2024 - 2027 | NSF-DFG Funding Opportunity      | 300k EUR     | Co-author |                |
|             | for Collaborations in Physics    | +231k USD    |           |                |
| 2023 - 2024 | Computational grant at SURF      | 1.0 Mio CPUh | PI        |                |
| 2021 - 2023 | Gauss computation allocation     | 44.1Mio CPUh | Co-author |                |
|             |                                  |              |           |                |

# Prizes

2023 Committee of Astroparticle Physics in the Netherlands (CAN) Thesis Prize

2018 The Chinese University of Hong Kong Physics Teaching Assistant Award

#### Publication summary (from inspirehep.net on 21-10-2024)

|                               | Excluding all | Including LVK papers    | All citable |
|-------------------------------|---------------|-------------------------|-------------|
|                               | LVK papers    | with major contribution | papers      |
| Number of papers:             | 36            | 39                      | 151         |
| Number of citations:          | $1,\!593$     | 3,673                   | $55,\!142$  |
| Average citations per paper : | 44.3          | 94.2                    | 365.2       |
| h-index:                      | 18            | 21                      | <b>72</b>   |

# **Key publications**

- P. T. H. Pang, et al. (2023). Nature Communications 14.1, p. 8352
- Advanced multi-messenger analysis software for binary neutron star mergers
- Integrated into Zwicky Transient Facility's online search pipeline ZTFReST
- S. Huth and P. T. H. Pang et al. (2022). Nature 606, pp. 276-280
- Joint-first authorship; State-of-the-art constraint on nuclear equation of state by combining multi-messenger astronomical observations & terrestrial heavy ion collision data
- T. Dietrich et al. (2020). Science 370.6523, pp. 1450–1453
- Lead analyst; State-of-the-art constraint on nuclear equation of state with multi-messenger astronomical observations at the time and estimation of the Hubble constant
- LIGO Scientific and Virgo Collaborations (2021). Phys. Rev. D 103.12, p. 122002

- Person-in-charge of sections VA and VII; LVK collaboration paper on testing general relativity

#### Referee for scientific journals

- 2024 Pres. Journal of Cosmology and Astroparticle Physics
- 2024 Pres. Nature
- 2023 Pres. Physical Review C
- 2023 Pres. Monthly Notices of the Royal Astronomical Society
- 2022 Pres. Physical Review D

Test of general relativity Interdisciplinary study on nuclear physics

## **Daily supervision**

|                                       | 2024 - Pres.<br>2024 | Frank Snijder<br>Marlinde Drent | Bachelor<br>Bachelor    |   |
|---------------------------------------|----------------------|---------------------------------|-------------------------|---|
|                                       | 2024                 | Tom Oeloff                      | Bachelor                |   |
|                                       | 2023 - Pres.         | Thibeau Wouters                 | Ph.D.                   |   |
|                                       | 2023 - Pres.         | Hauke Koehn                     | Ph.D.                   |   |
|                                       | 2023 - Pres.         | Sahil Jhawar                    | Master                  |   |
|                                       | 2021 - Pres.         | Nina Kunert                     | Ph.D.                   |   |
|                                       | 2021 - 2023          | Henrik Rose                     | Master                  | Now Ph.D. student at University of Potsdam        |
|                                       | 2020                 | Thomas Spieksma                 | Bachelor                | Now Ph.D. student at Niels Bohr Institute         |
|                                       |                      |                                 |                         | winner of best B.Sc. thesis in physics award 2020 |
|                                       | 2019 - 2020          | Adriaan Hengeveld               | Master                  | Now Radiation scientist at RIVM                   |
|                                       | 2019                 | Yasmeen Asali                   | Bachelor                | Now Ph.D. student at Yale University              |
| Courses tutored                       |                      |                                 |                         |   |
| 2022 Master-level Gravitational waves |                      | al waves                        | University of Amsterdam |   |
|                                       |                      |                                 |                         |   |

| 2022 | Master-level   | Gravitational waves                       | University of Amsterdam             |
|------|----------------|---|-------------------------------------|
| 2021 | Bachelor-level | Quantum mechanics                         | Utrecht University                  |
| 2021 | Master-level   | Gravitational waves                       | University of Amsterdam             |
| 2020 | Bachelor-level | Quantum mechanics                         | Utrecht University                  |
| 2019 | Master-level   | Gravitational waves                       | University of Groningen             |
| 2017 | Bachelor-level | Electromagnetic theory I                  | The Chinese University of Hong Kong |
| 2017 | Bachelor-level | Introduction to mechanics, fluids & waves | The Chinese University of Hong Kong |
| 2016 | Bachelor-level | Electromagnetic theory I                  | The Chinese University of Hong Kong |
|      |                |   |                                     |

#### Invited summer school teachings

- 2023 Department of Physics, The Chinese University of Hong Kong
- 2023 Zwicky Transient Facility (ZTF)

#### Invited colloquia

2024 University of Groningen Groningen, The Netherlands 2024 Johns Hopkins University Baltimore, USA 2024 Niels Bohr Institute Copenhagen, Denmark 2023 The Chinese University of Hong Kong Hong Kong 2023 University of Potsdam Potsdam, Germany 2023 KU Leuven Leuven, Belgium 2018 Johns Hopkins University Baltimore, USA

# Major collaborations

- 2023 Pres. Einstein Telescope Collaboration
- 2016 Pres.  $\,$  LIGO Scientific Virgo KAGRA Collaboration

## Management tasks

- 2024 Pres. Coordinator of eXtreme Matter in eXtreme Stars workshop white paper Gravitational-wave chapter
- 2023 Pres. Coordinator of Einstein Telescope blue book Division 5 chapter
- 2023 Pres. Committee member of the Nikhef Junior Colloquium
- 2023 Pres.  $\,$  Member of the Einstein Telescope Collaboration  $\,$
- 2021 2022 Person-in-charge of sections in LVK testing general relativity papers
- 2019 2022  $\,$  Maintainer of the testing general relativity pipeline TIGER in LVK  $\,$
- 2016 Pres. Member of the LIGO Scientific Virgo KAGRA Collaboration (LVK)

#### **Public outreaches**

- Featured on "Jong Talent" in the Dutch New Scientist's black hole special issue
- Interviewed by Dutch New Scientist and Physics Today for my publications
- Publications covered by international press, e.g., Forbes