

Hao-Jui Kuan

Curriculum Vitae

Personal Data

Surname Kuan
Name Hao-Jui
Date of birth 13 July 1995
Nationality Taiwan
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Address Albert-Einstein-Institut, Am Mühlenberg 1, 14476 Potsdam

Education

2019 - 2022 **PhD in Theoretical Astrophysics (summa cum laude)**
University of Tübingen, Tübingen, Germany (IAAT)
Advisor: Kostas D. Kokkotas
Main arguments: Quasi-normal modes (QNMs) in Magnetars, evolutionary study of binaries, and QNMs asteroseismology.
2017 - 2022 **PhD in Physics (joint degree)**
National Tsing Hua University, Hsinchu, Taiwan (NTHU)
Advisor: Chao-Qiang Geng
Main arguments: Hydrodynamics simulation in alternative gravities
2013 - 2017 **B.Sc Double major in Physics and Mathematics**

Research interest

- Evolutionary study of the pre-merger dynamics of magnetized neutron stars
- Dynamical aspects of compact objects in alternative theories
- Quasi-normal mode asteroseismology via universal relations, and tidal effects in binaries

Publication summary

Refereed Articles	...	11	(2 PRL, 2 PRD, 3 MNRAS, 1 A&A, 2 CQG, 1 EPJC)
Citations(ADS)	...	79	
Normalized Citations (ADS)	...	25.7	
h index (ADS)	...	5	

Awards, Honors, Fellowships & Grants

2020 - 2021 Principal Investigator of Sandwich-Scholarship Programme;
13,500 euro, funded by Deutscher Akademischer Austauschdienst (DAAD), and Ministry of Science and Technology, Taiwan (MOST) with funding ID being JYP 109-2927-I-007-503.
2017 - 2020 President's Scholarship by NTHU for PhD applicants with excellent grades.

Selected Presentations

2022

- Sep 10 **"Premerger Neutron Star Physics"**, plenary talk,
Eleventh Aegean summer school, Syros, Greece.
- Sep 08 **"Gravitational Phase Transition"**, parallel talk,
Eleventh Aegean summer school, Syros, Greece.
- May 16-19 **"Tidal effects in the pre-merger stage of coalescing binary neutron stars"**, e-poster,
PHAROS: The multi-messenger physics and astrophysics of neutron stars, Roma, Italy.
- Mar 3 **"Resonance shattering as triggers for precursors of SGRBs"**, parallel talk,
DPG Meeting of the Matter and Cosmos Section (SMuK), Heidelberg, Germany. (remotely)

2021

- Aug30 - Sep3 **"Tidal g -mode resonances in coalescing binaries of neutron stars as triggers for precursor flares of short gamma-ray bursts"**, parallel talk
DPG Meeting of the Matter and Cosmos Section (SMuK), Bad Honnef, Germany. (remotely)
- July 27 **" g -mode resonances as triggers for precursors of SGRBs"**, invited talk
Grav@zon group seminar, Federal University of Pará, Pará, Brazil. (remotely)
- Jun 22 **"Dynamical formation of scalarized black holes and neutron stars through stellar core collapse"**, invited talk
cosmo/GW journal club, Johns Hopkins University, Maryland, USA. (remotely)

2020

- Feb 24-28 **"Inverse-Chirp Imprint of GW in Scalar Tensor Theory"**, parallel talk
56th Karpacz Winter School in Theoretical Physics, Karpacz, Poland.

Teaching experience

- At NTHU** Teaching assistant for General Relativity (2016 Fall, 2018 Fall), Mathematical Physics (2017-2018), Thermal Physics (2016-2017), Calculus (2018-2019)
- At IAAT** Teaching assistant for Physical Practical (2021 Summer & Winter)
Teaching assistant for Grundkurs Elektromagnetismus (2022 Summer)

Miscellaneous

- Computer skills** Programming: Python, Fortran
Scientific SW: Matlab, Mathematica, Gnuplot
- Language** English (fluent), Mandarin (Mother tongue), Japanese (fluent)

References

- **Prof. Dr. Kostas Kokkotas**
Theoretical Astrophysics (IAAT)
Eberhard Karls Universität Tübingen
Auf der Morgenstelle 10, 72076 Tübingen, Germany
e-mail: kostas.kokkotas@uni-tuebingen.de
- **Dr. Daniela Doneva**
Theoretical Astrophysics (IAAT)
Eberhard Karls Universität Tübingen
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e-mail: daniela.doneva@uni-tuebingen.de
- **Dr. Arthur Suvorov**
Manly Astrophysics

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- **Prof. Dr. Stoytcho Yazadjiev**

Sofia University St Kliment Ohridski
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BG-Sofia 1504, Bulgaria
e-mail: yazad@phys.uni-sofia.bg

- **Prof. Dr. Chao-Qiang Geng**

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Tübingen

December 18, 2022

Hao-Jui Kuan