

CURRICULUM VITAE

Hao-Jui Kuan

Personal information

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Education

2019 - 2022 University of Tübingen, Tübingen, Germany. *Advisor: Kostas D. Kokkotas*
Ph.D. in Theoretical Astrophysics. Summa Cum Laude (excellent).
2017 - 2022 National Tsing Hua University, Taiwan. *Advisor: Chao-Qiang Geng*
PhD in Physics (joint degree).
2013 - 2017 National Tsing Hua University, Taiwan.
B.Sc Double major in Physics and Mathematics.

Professional experience

2023 - Postdoc in the Computational Relativistic Astrophysics division at the Max Planck Institute for Gravitational Physics (Albert Einstein Institute)

Honors and Awards

2023 Honorable Mention in GWIC-Braccini Thesis Prize ([website](#))
2023 Dr. Friedrich Förster Prize from University of Tübingen
2023 Student Outstanding Paper Award from NCTS (Taiwan)

Funded Grant Activity

2020 - 2021 “Neutron stars as gravitational wave sources”, Sandwich-Scholarship Programme, DAAD and MOST (Taiwan), €13,500.
2017 - 2020 Presidential Scholarship of National Tsing Hua University (Taiwan), converted as ~18,700 USD.

Reviewing Activities

Journals Physical Review D, International Journal of Modern Physics D, European Physical Journal C, Monthly Notices of the Royal Astronomical Society

List of Presentations

Plenary Talks at Conferences and Workshops

2022

Sep 10 “**Premerger Neutron Star Physics**”, Eleventh Aegean summer school, Syros, Greece.

Invited Seminars

2024

Aug 1 “**On the finite-size imprints on waveforms of binary neutron star mergers**”, UIUC.
July 11 “**Imprints of matter and scalar effects on waveforms from binary neutron star mergers**”, online-seminar-in-mathematical-numerical-relativity ([website](#)).
April 24 “**Imprints of matter and scalar effects on waveforms from binary neutron star mergers**”, Institute for Gravitational and Subatomic Physics (GRASP), Utrecht University.
April 8 “**(Dynamical) Tidal Effects in the Binary Neutron Star mergers**”, AstroParticle and Cosmology laboratory (APC), Paris, France.

2023

March 16 “**Dynamical Scalarization during Neutron Star Mergers in scalar-Gauss-Bonnet Theory**”, University of Tübingen, Germany.
February 3 “**Developing waveform involving dynamical tides**”, Academia Sinica, Taipei, Taiwan.
February 2 “**Gravitational Phase Transition in Massive Scalar-tensor Theory**”, National Center for Theoretical Sciences, Hsinchu, Taiwan.

2021

July 27 “ **g -mode resonances as triggers for precursors of SGRBs**”,

Jun 22 Grav@zon group, Federal University of Pará, Pará, Brazil.
“Dynamical formation of scalarized black holes and neutron stars through stellar core collapse”,
 cosmo/GW journal club, Johns Hopkins University, Maryland, USA.

Contributed Talks

2024

Oct 9 **“On the finite-size imprints on waveforms of binary neutron star mergers”**,
 talk, Observatoire de Paris - site de Meudon, France.
 Feb 28 **“Binary neutron star mergers in massive scalar-tensor theory”**, talk,
 Gravity and Cosmology 2024, Yukawa Institute for Theoretical Physics, Kyoto, Japan.

2023

Oct 26 **“Binary neutron star mergers in massive scalar-tensor theory: an adiabatic look”**, poster,
 GravityShapePisa 2023, Pisa, Italy.
 April 5 **“Dynamical Scalarization during BNS mergers in scalar-Gauss-Bonnet”**,
 CoCoNut meeting, Potsdam, Germany.
 March 22 **“Packed Message delivered by Tides in Binary Neutron Star Mergers”**,
 SMuK2023, Technical University Dresden, Germany.

2022

Sep 08 **“Gravitaional Phase Transition”**,
 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”**,
 DPG Meeting of the Matter and Cosmos section (SMuK), Heidelberg, Germany.

2021

Aug30 - Sep3 **“Tidal g -mode resonances in coalescing binaries of neutron stars as triggers for precursor flares of short gamma-ray bursts”**,
 DPG Meeting of the Matter and Cosmos section (SMuK), Bad Honnef, Germany.
 Feb 24-28 **“Inverse-Chirp Imprint of GW in Scalar Tensor Theory”**,
 56th Karpacz Winter School in Theoretical Physics, Karpacz, Poland.

Teaching Activities

Teaching assistant

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