Curriculum Vitae - SOICHIRO ISOYAMA (Dr.)

1 May 2024

Department of Physics, National University of Singapore
2 Science Drive 3, Block S13, M-04
Singapore, Singapore 117551

Personal statement:

Nationality :	Japanese
Citizenship :	Japan
Date of birth :	13 July 1984
Email:	*isoyama@yukawa.kyoto-u.ac.jp*
URL:	http2://www2.yukawa.kyoto-u.ac.jp/~soichiro.isoyama/
Field of expertise:	Gravitation and astrophysics
Main themes of research	Gravitational waves, relativistic two-body problems, Black holes

Education:

2014 D.Sc., Physics,
"Radiation reaction to the motion of a point particle in Kerr spcetime"
Yukawa institute for theoretical physics, Kyoto University,
Adviser: Takahiro Tanaka

2011 M.Sc., Physics,
Yukawa institute for theoretical physics, Kyoto University,
Adviser: Takahiro Tanaka

2009 B.Sc., Physics, Kyoto University Faculty of Science,
Adviser: Takashi Nakamura

Appointments / Position Titles:

Jan 2023 –	Senior Research Fellow	National University of Singapore, Singapore
Feb 2019 – Jul 2021	Research Fellow	University of Southampton, Southampton, UK
Jun 2017 – Jan 2019	Pesquisador Pós-Doutor	International Institute of Physics, Natal, Brazil
Sep 2014 – Aug 2016	JSPS Postdoctoral Fellow	University of Guelph, ON, Canada
Apr 2014 – Aug 2014	Part-time Lecturer	Daido University, Nagoya, Japan

Career break

Feb 2024 – Mar 2024	Family break - caring for my family
Aug 2021 – Dec 2022	Family break - caring for my family (worked in public offices)
Sep 2016 – May 2017	Study break - searching for a new role (worked as an agency worker)

Prizes, Awards and Honors:

2018 – 2020	Government of Ireland Postdoctoral Fellowship Irish Research Council (declined)
2017 – 2018	Postdoctoral Fellowship of the International Institute of Physics
2014 – 2016	Postdoctoral Fellowship for Research Abroad Japan Society for the Promotion of Science
2012 – 2014	Research Fellowship for Young Scientists (DC2) Japan Society for the Promotion of Science.

Teaching:

Lecturer (Daido University)

2014, Spring	"Introductory physics I (for non-science majors)"	undergraduate.

Teaching Assistant (Kyoto University)

2012, Fall	"Practical English for Natural Science Majors B"	undergraduate.
2012, Spring	"Practical English for Natural Science Majors A"	undergraduate.
2011, Fall	"Exercises in Statistical Mechanics A"	undergraduate.
2011, Spring	"Exercises in Statistical Mechanics B"	undergraduate.

Ph.D. Students co-Supervised (or closely worked with me):

National Univ. of Singapore (co-advised by Prof. A Chua and Dr. J Mathews)

Xiao-Ming Porter (2023, ongoing), *"Precessional (in)stability in relativistic spinning compact binaries."*

Honours Thesis Students:

National Univ. of Singapore (co-advised by Prof. A Chua)

Ayush Anand (2023), *"Multiband gravitational-wave astronomy: eccentricity."*
Mary Claire John (2023), *"Efficient modelling of self-force resonances."*
Amirudeen S/O Abdul Rahman (2022), *"Celestial Mechanics in Kerr Spacetime."*

Summer intern students:

National Univ. of Singapore (co-advised by Prof. A Chua)

Lehan Li (Summer 2023; from DAMTP).

Grants:

The list excludes small grants (e.g. the travel support) below 5K USD.

PI or Co-I

2023 – 2026	Co-PI, 250K SGD, *Enhancing gravitational-waveform models for EMRIs*, Academic Research Fund Tier 1 (PI: A. Chua), MOE.
2018 – 2020	PI, 92K EUR, *The gravitational waves of inspiraling large mass-ratio binaries*, Award for IRC postdoctoral fellows (declined).
2014 – 2016	PI, 11M JPY, *The gravitational emission from a compact object for testing GR,* Award for JSPS RA fellows.
2012 – 2014	PI, 1.8M JPY, *Using gravitational waves as a direct probe of a black hole,* Grant-in-Aid for JSPS fellows.
2025	Co-PI, 90K SGD, Conference support, IMS Thematic Programs, NUS.

Collaborator

2021 – 2025	*Construction of gravitational wave templates for precise observation of black holes in galactic nuclei*, Grant-in-Aid for Scientific Research (B) (PI: N. Sago), JSPS.
2021 – 2023	*Modeling and measuring extreme-mass-ratio-inspiral signals for LISA science* 2020 LISA preparatory science program (PI: A. Chua), NASA.
2020 – 2023	*Gravitational waveforms from extreme-mass-ratio inspirals for the space mission LISA* International Exchanges (PIs: A. Pound and T. Tanaka), Royal Society.

Publications:

15 articles in peer-reviewed journals, 1 article in conference proceedings, 1 article in arXiv, 1 book chapter, about 593 citations in iNSPIRE, h=12. This excludes collaboration papers; see attached for details.

Selected List of Invited Talks/Colloquia/Seminars Since 2014:

2021 Invited presentation, LISA EMRI Waveform Work Package discussion (virtual)
2017 Invited presentation, Black Holes Across the Gravitational Wave Spectrum, IIP, Natal

2024 Invited seminar, National Central University
2019 Invited seminar, Max Planck Institute (AEI)
2017 Invited seminar, International Institute of Physics (IIP)
2016 Invited seminar, Princeton University
2015 Invited seminar, University of Southampton
2015 Invited seminar, Cornell University
2014 Invited seminar, Osaka City University
(15+ additional contributed talks)

Services (Professional Level):

Peer Reviews

1. Peer Review, Grant Proposal, Dutch Research Council (NWO)
2. Referee, Classical and Quantum Gravity / European Journal of Physics etc (IOP journals)
3. Referee, General Relativity and Gravitation
4. Referee, International Journal of Modern Physics D
5. Referee, Journal of Cosmology and Astroparticle Physics
6. Referee, Physical Review Letters / D
7. Referee, Symmetry / Universe etc (MDPI journals)

Meetings/Conferences/Workshops

1. 2025, Co-organize, "Mathematical Methods for the General Relativistic Two-body Problem" IMS, Singapore, August 11-15, 2025.
2. 2024, Co-organize, "The 27th CAPRA meeting", NUS, Singapore, June 17-21, 2024.

Service (University Level):

- Organizer, Gravity Seminar, University of Southampton (2019 - 2021).

Professional Societies:

- The International Society on General Relativity and Gravitation (ISGRG).

Involvement in Large-scale Projects:

- Laser Interferometer Space Antenna (LISA) [2018 - present; LISA Science Group]
- DECi-hertz Interferometer Gravitational wave Observatory (DECIGO) [2023 - present; DECIGO working group]