

Isaac Ruoquan Wang

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Education

Rutgers University - New Brunswick

Sep. 2017 - Aug. 2023 (expected)

Ph.D, theoretical particle physics

New Jersey, USA

- **Thesis Advisor:** Prof. David Shih
- **Co-advisor:** Prof. Keisuke Harigaya (U-Chicago)

Fudan University

Sep. 2013 - Jun. 2017

B.Sc, department of physics

Shanghai, China

- **Thesis Advisor:** Prof. Xu-Guang Huang
- **Co-advisor:** Prof. Huan Zhong Huang (UCLA & Fudan U.)
- **Thesis:** Microcausality and CPT violation in chiral quantum electrodynamics

Publications

- [1] Baryogenesis in a Parity Solution to the Strong CP Problem, *Keisuke Harigaya* and **Isaac R. Wang**, arXiv: 2210.16207
- [2] First-Order Electroweak Phase Transition and Baryogenesis from a Natural Light Singlet Scalar, *Keisuke Harigaya* and **Isaac R. Wang**, arXiv: 2207.02867
- [3] Dark Photon and Displaced Vertices in MUonE Experiment, *Iftah Galon, David Shih* and **Isaac R. Wang**, arXiv: 2202.08843
- [4] Axionogenesis from $SU(2)_R$ Phase Transition, *Keisuke Harigaya* and **Isaac R. Wang**, arXiv: 2107.09679, doi: 10.1007/JHEP10(2021)022
- [5] Electroweak-like Baryogenesis with New Chiral Matter, *Kohei Fujikura, Keisuke Harigaya, Yuichiro Nakai* and **Isaac R. Wang**, arXiv: 2103.05005, doi: 10.1007/JHEP07(2021)224

Selected Talks

- **Electroweak baryogenesis from a naturally light singlet scalar**
UCLA TEPAPP Seminars **Oct. 2022**
Seminar
- **Electroweak baryogenesis from a naturally light singlet scalar**
Fermilab Theory Seminars **Sep. 2022**
Seminar
- **Phase transition and baryogenesis from a naturally light scalar singlet**
Majorana-Raychaudhuri Seminars (Virtual) **Sep. 2022**
Invited seminar
- **Phase transition and baryogenesis from a naturally light scalar singlet**
Cambridge High Energy Physics Workshop, Harvard/MIT, Cambridge, MA, USA **Aug. 2022**
Parallel
- **Dark photon and displaced vertex search at the MUonE experiment**
11th Workshop of the Long-Lived Particle Community (Virtual), CERN, Zurich **Jun. 2022**
Short Plenary
- **Dark photon and displaced vertex search at the MUonE experiment**
Pheno-2022, Pittsburgh, PA, USA **May. 2022**
Parallel
- **Baryogenesis from $SU(2)_R$ phase transition**
High-scale Baryogenesis Workshop (Virtual), IPMU, Kashiwa, Japan **Jan. 2022**
Plenary

- **Axiogenesis from $SU(2)_R$ phase transition** **Dec. 2021**
AstroDark-2021 (Virtual), IPMU, Kashiwa, Japan *Poster*
- **Axiogenesis from $SU(2)_R$ phase transition** **Nov. 2021**
Brookhaven Forum 2021 (Virtual), Brookhaven National Laboratory, NY, USA *Parallel*
- **Electroweak-like baryogenesis with new chiral matter** **Jul. 2020**
Rutgers University (Virtual), NJ, USA *Journalclub*

Other Conferences/Workshops

- **TASI 2022**, Boulder, CO, USA **Jun. 2022**
- **SUSY 2021**, Shanghai, China (Virtual) **Aug. 2021**
- **COSMO-21**, UIUC, IL (Virtual), USA **Aug. 2021**
- **Cambridge High Energy Workshop 2021**, Harvard/MIT, MA (Virtual), USA **Jul. 2021**

Teaching Experience

- Teaching Assistant, Rutgers University, Introduction to Cosmology 444 **Fall 2021**
- Teaching Assistant, Rutgers University, Analytical Physics 124 **Spring 2019**
- Teaching Assistant, Rutgers University, Analytical Physics 123 **Fall 2018**
- Teaching Assistant, Rutgers University, General Physics Lab 205 **Fall 2017**

Selected Awards

- Torrey Fellowship, Rutgers University **Sep. 2017**
- Undergraduate Major Scholarship, Fudan University **Dec. 2015**

Skills

Natural Languages	English, Chinese Mandarin
Programming Languages	Python, C/C++, Mathematica, Emacs-Lisp
Computer Skills	Git, L ^A T _E X, Vim/Emacs/VSC, Linux/Unix, Keynote, MS Offices

References

The following are people that have written reference letters for me since my PhD carrier.

Prof. David Shih	PhD thesis advisor , Rutgers University, dshih@physics.rutgers.edu
Prof. Keisuke Harigaya	University of Chicago, kharigaya@uchicago.edu
Prof. Yuichiro Nakai	Shanghai Jiaotong University & T.D.Lee Institute, ynakai@sjtu.edu.cn