

Wen-Hsuan Lucky Chang

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EDUCATION

National Taiwan University

Ph. D. in Physics • June 2019

National Tsing Hua University

B. Sc. in Physics • June 2011

BUSINESS

Cosmos Wanderer Studio

Cofounder, Writer, and Photographer • Since February 2019

Contributing Editor, Hiking Biji (The Note Co. Ltd.)

Cultural Correspondent, Cultural Affairs Bureau of New Taipei City

ACADEMIA

National Taiwan University

Research Assistant in Department of Physics • September 2011 - July 2019

Loop Quantum Cosmology (LQC)

Array for Microwave Background Anisotropy (AMiBA)

Edison-based Maker Project with Intel Corporation Taiwan

Light-field Camera with Lite-On IT Corporation

Teaching Assistant in Department of Physics • September 2011 - June 2016

Applied Mathematics

Mechanics

Electricity and Magnetism

Statistical Physics

General Relativity

Cosmology

STUDENT CLUB

National Taichung University of Education

Advisor of Astronomy Research Club • Since September 2020

National Taiwan University

Lecturer of Space Science Society • September 2013 - June 2015

National Tsing Hua University

President of Astronomy Club • July 2009 - June 2010

Instrument Manager of Astronomy Club • July 2008 - June 2009

Hui Wen High School

Instrument Manager of Astronomy Club • September 2005 - June 2006

VOLUNTEER

American Institute in Taiwan

Judge for NASA Hackathon Taiwan • October 2019

Invited Photographer for NASA Hackathon Taiwan • April 2017

Proty's Team of Amateur Telescope Maker

Teaching Assistant • September 2012 - December 2016

Mount Phoenix Observatory (MPO)

Observatory Introducer • January 2013 - January 2016

BBC Astronomy Camp

Wu Chien-Shiung Science Camp

NTU Spring+ Program

Annual Meeting of the Astronomical Society of Taiwan

Meeting of National Science Council

Lonely Planet Taiwan

Invited Speaker • December 2014

Go Camping with Lonely Planet

PUBLICATION

Journal Articles

5. Wen-Hsuan Lucky Chang, Yu-Chiung Lin, and Jiun-Huei Proty Wu, "CMB TT, EE, TE, and BB Angular Power Spectra Imprinted by Gravitational Waves from Parent Universe" (to be submitted).

4. Wen-Hsuan Lucky Chang, and Jiun-Huei Protty Wu, "Signatures of the Gravitational Waves from Parent Universe in the CMB B-mode Angular Power Spectrum" (submitted to *Phys. Rev. Lett.*).
3. Wen-Hsuan Lucky Chang and Jiun-Huei Protty Wu, "New Approach to Evolving Gravitational Waves in Loop Quantum Cosmology" ([arXiv:1806.10508](#), submitted to *Phys. Rev. D*).
2. Wen-Hsuan Lucky Chang and Jiun-Huei Protty Wu, "[Time asymmetry of cosmic background evolution in loop quantum cosmology](#)", *Phys. Rev. D* **99**, 123528 (2019).
1. Kai-Yang Lin, Hiroaki Nishioka, Fu-Cheng Wang, Chih-Wei Locutus Huang, Yu-Wei Liao, Jiun-Huei Protty Wu, ... Wen-Hsuan Lucky Chang, ..., "[AMiBA: CLUSTER SUNYAEV-ZEL'DOVICH EFFECT OBSERVATIONS WITH THE EXPANDED 13-ELEMENT ARRAY](#)", *AstroPhys. J.* **830**, 91 (2016).

Conference Abstracts

1. Wen-Hsuan Lucky Chang and Jiun-Huei Protty Wu, "[Probing 'Parent Universe' in Loop Quantum Cosmology with B-mode Polarization in Cosmic Microwave Background](#)", The 228th Meeting of the American Astronomical Society, Jun 12th - 16th, 2016.

Telegram

1. Jiun-Huei Protty Wu and Wen-Hsuan Chang, "[Prediscovery observation of SN 2014J in M82 by Mt. Phoenix Observatory in Taiwan](#)", Feb 12th, 2014.
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