

Hengyuan Guo

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China

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arXiv: http://arxiv.org/hengyuan_guo

Current Position

Post-doctor With the cooperation with Prof Pengming Zhang.
School of Physics and Astronomy. SYSU. Zhuhai China.
*Due*2023.8 – 2025.8

Education

Institute of Modern Physics, UCAS.

Lanzhou, China

Ph.D. in Physics, June 2023

Advisor: Jarah Evslin

Dissertation title: The Research of Soliton and Duality in Quantum Field Theory

Shaanxi Normal University

Xian, China

B.S. in Physics, June 2018

Advisor: Youkai Wang

Dissertation title: The Deduction of Feynman Rule

Honors and Awards

Dr. Li Yuehua Zhu Scholarship of PhD

June 2020

University of Chinese Academy of Sciences.

Excellent program of "Innovation and entrepreneurship program for college students"(As host)

June 2017

Shaanxi Normal University

Professional scholarships

Winter 2016

Shaanxi Normal University

Excellent Student for the Innovation of Research

June 2016

Shaanxi Normal University

Professional scholarships

October 2015

Shaanxi Normal University

Professional scholarships

April 2015

Shaanxi Normal University

Publications and Preprints

1. *Leading quantum correction to the ϕ^4 kink form factor*, Hengyuan Guo, *Phys Rev D*.106, 096001(2022) arXiv:2209.03650
2. *Removing tadpoles in a soliton sector*, Jarah.E, Hengyuan Guo, *J. High Energ. Phys* 2021, 128 (2021) arXiv:2110.00234
3. *Excited kinks as quantum states*, Jarah.E, Hengyuan Guo, *Eur. Phys. J. C* 81, 936 (2021). arXiv:2104.03612.
4. *Alternative to collective coordinates*, Jarah.E, Hengyuan Guo, *Phys Rev D*. 103, L041701 (2021), arXiv:2102.08028.
5. *Two-Loop Scalar Kinks*, Jarah.E, Hengyuan Guo, *Phys Rev D*. 103, 125011 (2021), arXiv:2012.04912.
6. *Finite derivation of the one-loop sine-Gordon soliton mass*, Hengyuan Guo, Jarah.E, *J. High Energ. Phys* 2020, 140 (2020) arXiv:1912.08507

Research interest

1. Topological soliton, Duality and super-symmetry
2. Skyrmion dynamic and application
3. Geometrical structure of the quantum field theory
4. Algebraic Structure of Elementary Particle Physics
5. Cosmology theory and observation

Skill and program

1. Mathematica
 2. python
 3. C++
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Other interest

Trek

Lhasa -Dali city trekking

June 2014

Hike

mid-long mountains acrosses in Qinlin Mountain, Brag Sgam Nang and other mountains, midterm across in Desert,

2014-2020

Bicycle

Xian-Chongqing city, Xian-Inagi/Daocheng conutry, Circle-Hetao Plain

Vacation