

Baiyang Zhang

University of Minnesota

School of Physics and Astronomy
116 Church Street S.E., Minneapolis,
Minnesota, MN 55455, United States

Phone: (+1) 6517959011
Email: zhan7300@umn.edu

Education

Institute of Modern Physics, Chinese Academy of Sciences

2012 – 2018

Ph.D. in Theoretical Physics

Advisor: Pengming Zhang

Dissertation title: Effects of Quark-gluon Interactions Induced by
Nontrivial Topological Structures in the QCD Vacuum

Lanzhou University

2007 – 2011

B.Sc in Physics

Current Position

September 2019 – Present

Postdoctoral researcher in the group of Prof. Aleksey Cherman, School of Physics and Astronomy,
University of Minnesota.

Previous Employment

January 2018 – August 2019

Postdoctoral researcher in the group of Prof. Wolf György, Wigner Research Centre for Physics,
Hungarian Academy of Sciences.

Conferences/Talks

Seminar, University of Minnesota

May 2021

**Talk: Deconfinement in SU(N) Gauge Theory with a Massive Adjoint
Fermion**

Balaton Workshop 2019

September 2019

**Talk: Spin Formalism and the Hadronic Density Matrix in Dilepton
Production**

Tihany, Hungary

Phenomenology of Hot and Dense Matter for Future Accelerators

September 2018

Prague, Czech Republic

9th Workshop on Hadron physics in China and Opportunities Worldwide

July 2017

Talk: The Pauli Form Factor Induced by Instanton Effects in QCD

Nanjing, China

The Helmholtz International Summer School

July 2015

Dubna, Russia

The Sixth Workshop on Hadron Physics in China and Opportunities in US

July 2014

Talk: Spin-flavor Study With EIC@HIAF

Lanzhou, China

The 21st International Symposium on Spin Physics

October 2014

Poster: Flavor Separation for Polarized Parton Distribution Functions

Beijing, China

The 9th Circum-Pan-Pacific Spin Symposium

August 2013

Ji-Nan, Shandong, China

Publications

1. *The Compactified Principal Chiral Model's Mass Gap*, Jarah Evslin, **Baiyang Zhang**, Phys. Rev. D98 (2018), 085016. arXiv:1809.10973.
2. *Gluonic Distribution in the Constituent Quark and Nucleon Induced by the Instantons*, **Baiyang Zhang**, Nikolai Kochelev, Hee-Jung Lee, Pengming Zhang, Phys. Part. Nuclei Lett. (2018) 15:371., arXiv:1709.01640.
3. *The Pauli Form Factor of Quark and Nontrivial Topological Structure of the QCD*, **Baiyang Zhang**, Andrey Radzhabov, Nikolai Kochelev, Pengming Zhang, Phys. Rev. D96 (2017), 054030, arXiv:1703.04333.
4. *Generalized Skyrme Model with the Loosely Bound Potential*, S. B. Gudnason, **Baiyang Zhang**, N. Ma, Phys. Rev. D 94, 125004 (2016), arXiv:1609.01591.
5. *Gluonic Structure of the Constituent Quark*, N. Kochelev, Hee-Jung Lee, **Baiyang Zhang**, Pengming Zhang, Phys. Lett. B 757 (2016) 420-425. arXiv:1512.03863.
6. *Nonperturbative Collisional Energy Loss of Heavy Quarks in Quark-gluon Plasma*, N. Kochelev, Hee-Jung Lee, Y. Oh, **Baiyang Zhang**, Pengming Zhang, Phys. Rev. C 93 (2016), 021901, arXiv:1510.00472.
7. *Anomalous Pion Production Induced by Nontrivial Topological Structure of QCD Vacuum*, Kochelev, Hee-Jung Lee, **Baiyang Zhang**, Pengming Zhang, Phys. Rev. D 92 (2015), 034025. arXiv:1503.05683.

Professional Service

Co-organizer

Fall 2020

Nuclear Theory Seminar: University of Minnesota

Organizer

Spring 2021 – Fall 2021

Nuclear Theory Seminar: University of Minnesota

Organizer

Fall 2016 - Fall 2018

Graduate Student Quantum Field Theory Seminar

Institute of Modern Physics, Chinese Academy of Sciences

References

Aleksey Cherman

Assistant Professor of Physics, University of Minnesota

116 Church Street SE., Rm. 375-12

Minneapolis, MN 55455

email: acherman@umn.edu

office phone: 1-612-624-6525

Jarah EvslinSenior Researcher, Institute of Modern Physics (IMP)
Chinese Academy of Sciences (CAS)

509 Nanchang Road, Lanzhou, Gansu,

China 730000

email: jarah@impcas.ac.cn

Pengming Zhang

Professor of Physics, Sun Yat-sen University

Haibing building 18 Rm 214

Zhuhai Campus of Sun Yat-Sen University

Tangjiawan, Zhuhai, Guangdong, China 519082

email: zhangpm5@mail.sysu.edu.cn