

Shu-yi Wei

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Personal Information

Male, born in November, 1990, Chinese citizen.

Timeline

Bachelor of Science, in *Physics*, Shandong University, China, 2006 – 2010.

Ph.D., in *Theoretical Physics*, Shandong University, China, 2010 – 2015.

Postdoc, Central China Normal University, China, 2015 – 2017.

Postdoc, CPHT, Ecole Polytechnique, France, 2017 – 2019.

Postdoc, ECT*, Italy, 2019 – Now.

Research Interests

Phenomenology of QCD resummations, small- x saturation physics and jet quenching in high energy heavy-ion collisions.

List of Publications : five key publications]

1. Exploring the collective phenomenon at the Electron-Ion Collider

Y. Shi, L. Wang, S.Y. Wei, B.W. Xiao, L. Zheng. arXiv:[2008.03569](https://arxiv.org/abs/2008.03569). (2020)

2. Spin alignment of vector mesons in high energy pp collisions

K.B. Chen, Z.T. Liang, Y.K. Song, S.Y. Wei. [Phys.Rev.D102, 034001](https://arxiv.org/abs/2003.03401). (2020)

3. Collectivity of heavy mesons in proton-nucleus collisions

C. Zhang, C. Marquet, G.Y. Qin, Y. Shi, L. Wang, S.Y. Wei, B.W. Xiao. [PRD102, 034010](https://arxiv.org/abs/2003.03401). (2020)

4. Probing jet medium interaction via $Z(H)$ + jet momentum imbalance

L. Chen, S.Y. Wei, H.Z. Zhang. arXiv:[2001.07606](https://arxiv.org/abs/2001.07606). (2020)

. Medium-induced transverse momentum broadening via forward dijet correlations

J.Y. Jia, S.Y. Wei, B.W. Xiao, F. Yuan. [Phys.Rev.D101, 094008](https://arxiv.org/abs/2003.09408). (2020)

- ☛ **Probing parton saturation with forward Z^0 -boson production at small transverse momentum in pp and pA collisions**
C. Marquet, S.Y. Wei, B.W. Xiao. [Phys.Lett.B802, 135253](#). (2020)
- 7. **Elliptic flow of heavy quarkonia in pA collisions**
C. Zhang, C. Marquet, G.Y. Qin, S.Y. Wei, B.W. Xiao. [Phys.Rev.Lett.122, 172302](#). (2019)
- 8. **Extracting jet transport coefficient via single hadron and dihadron productions in high-energy heavy-ion collisions**
M. Xie, S.Y. Wei, G.Y. Qin, H.Z. Zhang. [Eur.Phys.J.C79, 589](#). (2019)
- ☛ **On the dihadron angular correlations in forward pA collisions**
A. Stasto, S.Y. Wei, B.W. Xiao, F. Yuan. [Phys.Lett.B784, 301-306](#). (2018)
- 10. **Dijet asymmetry in the resummation improved perturbative QCD approach**
L. Chen, G.Y. Qin, S.Y. Wei, B.W. Xiao, H.Z. Zhang. [Phys.Lett.B782, 773-778](#). (2018)
- 11. **Study of isolated-photon and jet momentum imbalance in pp and PbPb collisions**
L. Chen, G.Y. Qin, L. Wang, S.Y. Wei, B.W. Xiao, H.Z. Zhang, Y.Q. Zhang. [Nucl.Phys.B933, 306-319](#). (2018)
- ☛ **Probing transverse momentum broadening via dihadron and hadron-jet angular correlations in relativistic heavy-ion collisions**
L. Chen, G.Y. Qin, S.Y. Wei, B.W. Xiao, H.Z. Zhang. [Phys.Lett.B773, 672-676](#). (2017)
- 13. **Effect of medium recoil and p_T broadening on single inclusive jet suppression in high-energy heavy-ion collisions**
X.N. Wang, S.Y. Wei, H.Z. Zhang. [Phys.Rev.C96, 034903](#). (2017)
- ☛ **Twist-4 contributions to semi-inclusive deeply inelastic scatterings with polarized beam and target**
S.Y. Wei, Y.K. Song, K.B. Chen, Z.T. Liang. [Phys.Rev.D95, 074017](#). (2017)
- 15. **Tensor polarization dependent fragmentation functions and $e^+e^- \rightarrow \pi V X$ at high energies**
K.B. Chen, W.H. Yang, S.Y. Wei, Z.T. Liang. [Phys.Rev.D94, 034003](#). (2016)
- 16. **Leading and higher twist contributions in semi-inclusive e^+e^- annihilation at high energies**
S.Y. Wei, K.B. Chen, Y.K. Song, Z.T. Liang. [Phys.Rev.D91, 034015](#). (2015)

17. **Three dimensional imaging of the nucleon and semi-inclusive high energy reactions**

K.B. Chen, S.Y. Wei, Z.T. Liang. [Front.Phys.10\(6\), 101204.](#) (2015)

18. **Higher-twist contribution to fragmentation function in inclusive hadron production in e^+e^- annihilation**

S.Y. Wei, Y.K. Song, Z.T. Liang. [Phys.Rev.D89, 014024.](#) (2014)

Ph.D Dissertation

1. **A study of fragmentation functions in electron positron annihilation at high energies**

Shu-yi Wei. Ph.D. Supervisor: Zuo-tang Liang. [Personal copy in Chinese.](#) (May, 2015)

Selected Talks [†: Speaker]

1. **Angular de-correlation of forward di-hadrons: on the optimal p_T range to probe gluon saturation**

G. Giacalone, C. Marquet, M. Mataw, S.Y. Wei[†]. [Hard Probes 2020.](#) [Recording.](#)

2. **Phenomenology of Sudakov Resummation in the CGC Framework**

S.Y. Wei[†]. [Workshop on Resummation, Evolution, Factorization \(REF 2019\).](#)

3. **Probing jet medium interaction via dijet and photon-jet p_T imbalance**

L. Chen, G.Y. Qin, S.Y. Wei[†], B.W. Xiao, H.Z. Zhang. [Hard Probes 2018.](#)

4. **Probing transverse momentum broadening via dihadron and hadron-jet angular decorrelations**

L. Chen, G.Y. Qin, S.Y. Wei[†], B.W. Xiao, H.Z. Zhang. [Hard Probes 2016.](#)

5. **Higher twist effects in e^+e^- annihilation at high energies**

S.Y. Wei[†]. [21st International Symposium on Spin Physics \(Spin2014\).](#)