

CURRICULUM VITÆ

Zhongbo Kang

Associate Professor

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March 8, 2022

I am an associate professor in Department of Physics and Astronomy at University of California Los Angeles (UCLA). My other affiliations include faculty member at Mani L. Bhaumik Institute for Theoretical Physics and Center for Quantum Science and Engineering (CQSE) at UCLA, and associate member in Center for Frontiers in Nuclear Science (CFNS) at Stony Brook University and Brookhaven National Laboratory. My research interests are primarily in Quantum Chromodynamics (QCD) and strong interaction, and their applications in high energy nuclear and particle physics. The research is relevant for all existing and planned experiments in high-energy nuclear and particle physics ranging from Jefferson Lab 12 GeV to the Large Hadron Collider, including the Electron Ion Collider, which has been planned to be built at Brookhaven National Laboratory in US.

Education

Ph.D., Theoretical Nuclear Physics, August 2009

Department of Physics and Astronomy, Iowa State University, Ames, Iowa, USA

– Thesis: “*QCD quantum correlation and multi-parton dynamics*”

– Supervisor: Prof. Jian-Wei Qiu

M.S., Theoretical Physics, July 2003

Institute of Particle Physics, Central China Normal University, Wuhan, China

B.S., Physics, July 2001

Department of Physics, Central China Normal University, Wuhan, China

Appointments

Associate Professor, July 2021 – present

Deputy Director, Physics Graduate Bridge Program

Department of Physics and Astronomy

University of California Los Angeles

Assistant Professor, November 2016 – June 2021

Department of Physics and Astronomy

University of California Los Angeles

Staff Scientist (level 3), February 2016 – September 2018

Theoretical Division, Los Alamos National Laboratory

J. Robert Oppenheimer Fellow, March 2013 – February 2016
Theoretical Division, Los Alamos National Laboratory

Director's Postdoctoral Fellow, April 2012 – February 2013
Theoretical Division, Los Alamos National Laboratory

Research Associate, September 2009 – April 2012
RIKEN BNL Research Center, Brookhaven National Laboratory

Awards, Honors and Memberships

Awards

1. Department's Outstanding Teaching Award
University of California Los Angeles, 2017/18, 2018/19, 2020/21
2. Department's Teaching Innovator of the Year Award
University of California Los Angeles, 2019/20
3. NSF CAREER Award
Faculty Early Career Development Program (CAREER) Award, National Science Foundation,
07/2020 – 06/2025
4. RHIC & AGS Merit Award
RHIC/AGS Users' Executive Committee, Brookhaven National Laboratory, 2019
citation: "for his unique and ground-breaking theoretical contributions to the field of transverse momentum
dependent parton distribution functions and jet physics."
5. UCLA Faculty Career Development Award
University of California Los Angeles, 2018
6. J. Robert Oppenheimer Fellowship
Los Alamos National Laboratory, March 2013 – February 2016
7. Excellence in Peer Review
Nuclear Physics A, 2013 and 2014
8. Director's Postdoctoral Fellowship
Los Alamos National Laboratory, April 2012 – February 2013
9. Frontier Physics Working Month Fellowship
Center for High Energy Physics, Peking University, Beijing, China, 2012
10. Named one of the most valued reviewers of 2011
Nuclear Physics A, 2012
11. Our work on spin physics has been selected as research highlight by RIKEN
RIKEN, Japan, February 2012
See links at riken.jp and phys.org
12. G. W. Fox Memorial Award for excellence in research
Iowa State University, 2009

Honorary Society

Sigma Xi Scientific Research Honor Society, 2021

Golden Key International Honor Society, 2008

The Honor Society of Phi Kappa Phi, 2007

Membership

Member of the American Physical Society (APS), 2007 – Present

Member of the American Association for the Advancement of Science (AAAS), 2020 – Present

Mentoring

Postdocs and students I am working with and/or have worked with closely:

Current

◇ Postdoc

- Farid Salazar Wong, 10/2021 – present
joint with UC Berkeley and LBNL
- Daniele Anderle, 10/2019 – present
joint with IQM of South China Normal University
- Wai Kai Lai, 10/2020 – present
joint with IQM of South China Normal University

◇ Graduate Students

- John Terry, 03/2017 – present
UCLA 2021 – 2022 Dissertation Year Fellowship
NSF Graduate Research Fellowship, 2018 – 2021, awarded by National Science Foundation
- Jared Reiten, 07/2017 – present
UC-National Lab In-Residence Graduate Fellowship, awarded by UC Office of the President (UCOP)
- Fanyi Zhao, 01/2019 – present
Bhaumik Institute Nina Byers Summer Fellowship in Theoretical Physics, 2020
Graduate Fellowship in Quantum Information Science, 2021
awarded by Mani L. Bhaumik Institute for Theoretical Physics at UCLA
- Alexander Czajka, 09/2021 – present

◇ PhD Committee Member

- Keith Landry (2016), Agnieszka Wergieluk (2017–2021), Alexander Wickes (2018–), Krystal Alfonso (2018–), Maria Sergeeva (2020–), Dylan Neff (2020–), Brian Chan (2021–), Zhiwan Xu (2021–)

◇ Undergraduate Students

- Amanda Wei, 10/2018 – present
Departmental REU summer fellowship (summer 2020), awarded by UCLA Physics and Astronomy

- Mishary Alrashed, 08/2020 – present
Conference Experience for Undergraduates 2021 Award from American Physical Society
Departmental REU summer fellowship (summer 2021), awarded by UCLA Physics and Astronomy
- Jinghong Yang, 10/2020 – present
UCLA Honors Summer Research Stipend (summer 2021)
- Parth Bhatnagar, 10/2020 – present
- Henry Ma, 06/2021 – present
- Yuxuan Tee, 11/2021 – present
- Sky Shi, 11/2021 – present
- Martin Chau, 02/2022 – present
- Grace Garrmire, 02/2022 – present
- Jeisson Pulido, 02/2022 – present

Past

- ◇ Nick Millkey, undergraduate student, 06/2021 – 08/2021
Departmental REU summer fellowship (summer 2021), awarded by UCLA Physics and Astronomy
- ◇ Alexander Czajka, undergraduate student, 11/2020 – 08/2021 (next: a graduate student at UCLA)
- ◇ Nanxi Yao, undergraduate student, 06/2020 – 08/2021 (next: a graduate student at University of Illinois Urbana-Champaign)
- ◇ Dingyu Shao, postdoc, 09/2019 – 01/2021 (next: a faculty member at Fudan University, Shanghai, China)
CFNS-University fellow
- ◇ Daniel Callos, undergraduate student, 03/2018 – 10/2020 (next: a Decision Analytics Associate at ZS Associates)
Undergraduate Research Fellow (2020), awarded by UCLA Undergraduate Research Fellows Program (URFP)
- ◇ Kyle Lee (Stony Brook University), graduate student, 10/2016 – 08/2020 (next: a postdoctoral scholar at UC Berkeley and Lawrence Berkeley National Laboratory)
- ◇ Bade Sayki, undergraduate student, 08/2018 – 07/2019 (next: a researcher at Los Alamos National Laboratory)
- ◇ Andrew Gordeev, undergraduate student, 11/2017 – 06/2019 (next: a graduate student at Duke University)
Undergraduate Research Scholar (2018 – 2019), awarded by UCLA Undergraduate Research Scholars Program (URSP)
- ◇ Dr. Maarten Buffing, postdoc, 09/2017 – 08/2018 (next: a model development & run specialist at Aegon in The Hague)
- ◇ Manvir Grewal, undergraduate student, 04/2017 – 07/2018 (next: a graduate student at Columbia University)
- ◇ Dr. Felix Ringer, postdoc, 07/2015 – 03/2017, Los Alamos National Laboratory (next: a postdoctoral scholar at Lawrence Berkeley National Laboratory)
- ◇ Dr. Hongxi Xing, postdoc, 09/2013 – 09/2016, Los Alamos National Laboratory (next: a postdoctoral scholar at Northwestern University/Argonne National Laboratory, now a faculty member at South China Normal University, Guangzhou, China)

- ◇ Sifu Luo, master's student, 09/2014 – 07/2016, Central China Normal University, China (next: a graduate student at Texas A&M University)

Community Service

Grant/proposal reviewer

- ◇ U.S. Department of Energy
 - Nuclear Physics
 - Advanced Scientific Computing Research (ASCR) Leadership Computing Challenge
- ◇ U.S. National Science Foundation
 - Nuclear Physics
 - Panel Review
- ◇ Croatian Science Foundation
- ◇ REinforcing Women In REsearch (REWIRE) COFUND Programme, University of Vienna, Austria
- ◇ Royal Irish Academy

Journal editor[†] and referee[◊]

† Symmetry: Editorial Board Member, since 2021

- ◇ Physical Review Letters
- ◇ Physical Review C
- ◇ Physical Review D
- ◇ Physics Letters B
- ◇ Journal of High Energy Physics
- ◇ Nuclear Physics A
- ◇ Nuclear Physics B
- ◇ Progress in Particle and Nuclear Physics
- ◇ Journal of Physics G
- ◇ European Physical Journal A
- ◇ Advances in High Energy Physics
- ◇ International Journal of Modern Physics A
- ◇ International Journal of Modern Physics E
- ◇ New Journal of Physics
- ◇ Chinese Physics C
- ◇ Chinese Physics Letters
- ◇ Journal of the Korean Physical Society

Committee work

1. One of three community coordinators for Snowmass 2021 Letter of Interest “Jet Physics at the Electron Ion Collider”, within Energy Frontier 06 (QCD and strong interactions: Hadronic structure and forward QCD) and 07 (QCD and strong interactions: Heavy Ions) groups
2. A focus convener for the Quarkonium Working Group on the topic of Electron Ion Collider (EIC), since October 2018
3. Member of the Writing Group: “The RHIC cold QCD Plan for 2017 to 2023: A portal to the EIC”, submitted to the Office of Nuclear Physics, Office of Science, Department of Energy, charged by Dr. Berndt Mueller, Associate Laboratory Director for Nuclear & Particle Physics at Brookhaven National Laboratory, 2015, arXiv:1602.03922 [nucl-ex]
4. Member of the Community White Paper Writing Group: “The RHIC Spin Program: Achievements and Future Opportunities”, submitted to 2014–2015 Nuclear Science Advisory Committee Long Range Plan Working Group, 2014, arXiv:1501.01220 [nucl-ex]
5. Member of the Community White Paper Writing Group: “Study of Fragmentation Functions in e^+e^- Annihilation”, submitted to 2014–2015 Nuclear Science Advisory Committee Long Range Plan Working Group, 2014
6. Member of the Community White Paper Writing Group: “The RHIC Spin Program: Achievements and Future Opportunities”, submitted to the Tribble Panel of Nuclear Science Advisory Committee, 2012, arXiv:1304.0079 [nucl-ex]

Conference organization

1. Co-organizer of “Jet Physics: From RHIC/LHC to EIC”, Center for Frontiers in Nuclear Science, Stony Brook University, June 29–July 1, 2022
<https://indico.bnl.gov/event/14375/>
2. Co-organizer of “QCD Evolution Workshop 2022”, University of Virginia, May 9–13, 2022
<https://conference.phys.virginia.edu/indico/event/7/>
3. Co-organizer of “Correlations in Partonic and Hadronic Interactions (CPHI-2022) Workshop”, Duke University, March 7–12, 2022
<https://indico.jlab.org/event/498/>
4. Co-organizer of “The 2nd Workshop on Jets for 3D Imaging at the EIC”, Stony Brook University, September 27–29, 2021
<https://indico.bnl.gov/event/10555/>
5. Co-convener on “Week 4: Jets in cold quark and gluon matter” of the INT program: Probing QCD at High Energy and Density with Jets, Institute for Nuclear Theory, University of Washington, Seattle, WA, August 16–20, 2021
<https://sites.google.com/uw.edu/int/programs/21-2b>
6. Chair of organizing committee, “QCD Evolution Workshop 2021”, University of California, Los Angeles, CA, May 10–14, 2021
<https://indico.bnl.gov/event/6803/>
7. Co-organizer for the workshop, “EIC opportunities for Snowmass”, January 25–29, 2021
<https://indico.bnl.gov/event/9376/>
8. Co-organizer of “Jets for 3D imaging at the EIC”, University of California, Riverside, CA, November 23–25, 2020
<https://indico.bnl.gov/event/8066/>

9. Co-chair of organizing committee, “4th meeting of TMD Collaboration”, DOE Topical Collaboration for the Coordinated Theoretical Approach to Transverse Momentum Dependent Hadron Structure in QCD (TMD Collaboration), Lawrence Berkeley National Laboratory, Berkeley, CA, September 16–18, 2019
10. Local Organizing Committee, “Physics Opportunities at an Electron-Ion Collider (POETIC 2019)”, Lawrence Berkeley National Laboratory, Berkeley, CA, September 16–21, 2019
<https://conferences.lbl.gov/event/196/>
11. Chair of organizing committee, “UCLA 2019 Santa Fe Jets and Heavy Flavor Workshop”, University of California, Los Angeles, CA, January 28–30, 2019
<https://conferences.pa.ucla.edu/jet19/>
12. Co-convenor on “Workshop on Transverse spin and TMDs” of the INT program: Probing Nucleons and Nuclei in High Energy Collisions, Institute for Nuclear Theory, University of Washington, Seattle, WA, October 1–November 16, 2018
<http://www.int.washington.edu/PROGRAMS/18-3/>
13. Co-convenor on “Jets, Energy Loss, Hadronization, and Nuclear Structure”, Electron-Ion Collider User Group Meeting 2018, The Catholic University of America, Washington, D.C., July 30–August 2, 2018
<https://www.jlab.org/conferences/eicugm18/>
14. Co-convenor on “Partonic and Gluonic Distributions in Nucleons and Nuclei”, 13th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2018), Palm Springs, CA, May 28–June 3, 2018
<http://cipanp18.berkeley.edu/>
15. Co-organizer of Advances in QCD and Applications to Hadron Colliders 2017 Workshop, University of California, Los Angeles, CA, November 8–10, 2017
<https://indico.fnal.gov/event/ANLHEP1245/>
16. Co-convenor on “Phenomenology and new observables”, Electron Ion Collider User Group Meeting 2017, Trieste, Italy, July 18–22, 2017
<http://eicug2017.ts.infn.it/>
17. Co-organizer of QCD Evolution Workshop 2017, Jefferson Lab, Newport News, VA, May 22–26, 2017
<https://www.jlab.org/conferences/qcd-evolution2017/index.html>
18. Co-organizer of Topical Workshop on QCD Structure of Nucleons in the Modern Era, University of California, Los Angeles, CA, May 4–6, 2017
<https://indico.fnal.gov/event/ANLHEP1206/>
19. Co-organizer of QCD Chirality Workshop 2017, University of California, Los Angeles, CA, March 27–30, 2017
<http://staranalysis.physics.ucla.edu/>
20. Co-convenor on “Spin and 3D Structure”, 25th International Workshop on Deep Inelastic Scattering and Related Topics (DIS 2017), Birmingham, UK, April 3–7, 2017
<http://www.ep.ph.bham.ac.uk/DIS2017/>
21. Co-organizer of Santa Fe Jets and Heavy Flavor 2017 Workshop, Santa Fe, NM, February 13–15, 2017
<http://indico.fnal.gov/event/sfjet17>

22. Local Program Committee member, 22nd International Symposium on Spin Physics (SPIN 2016), Urbana-Champaign, IL, September 25–30, 2016
<http://www.indiana.edu/~spin2016/>
23. Co-organizer of QCD Evolution 2016 Workshop, National Institute for Subatomic Physics (Nikhef), Amsterdam, May 30–June 3, 2016
<https://indico.nikhef.nl/event/191/>
24. Co-organizer of Santa Fe Jets and Heavy Flavor 2016 Workshop, Santa Fe, NM, January 11–13, 2016
<http://indico.fnal.gov/event/sfjet16>
25. Co-chair of QCD Evolution 2015 Workshop, Jefferson Lab, Newport News, VA, May 26–30, 2015
<http://www.jlab.org/conferences/qcd-evolution2015/>
26. Co-organizer of XIIth Annual Workshop on Soft-Collinear Effective Theory (SCET 2015), Santa Fe, NM, March 25–27, 2015
<https://indico.fnal.gov/event/9397/>
27. Co-organizer of Informal Pre-Town Meeting at JLab, Jefferson Lab, Newport News, VA, August 13–15, 2014
<http://www.jlab.org/conferences/pretownjlab2014/>
28. Co-chair of QCD Evolution 2014 Workshop, Jointly organized by Los Alamos National Laboratory and Jefferson Lab, Santa Fe, NM, May 12–16, 2014
<http://www.jlab.org/conferences/qcd2014/>
29. Co-convener of Berkeley Summer Program 2013, QCD Landscape of the Nucleon and Atomic Nuclei, Lawrence Berkeley National Laboratory, Berkeley, CA, August 12–16, 2013
<https://sites.google.com/a/lbl.gov/berkeley-summer-program/>
30. Co-convener of QCD Evolution Workshop 2013, Jefferson Lab, Newport News, VA, May 6–10, 2013
<http://www.jlab.org/conferences/qcd2013/index.html>
31. International coordinator for Frontier Physics Working Month 2013, Center for High-Energy Physics (Director: Professor T. D. Lee), Peking University, China, May 27 – June 28, 2013
32. Co-organizer of Frontier Physics Working Month 2012, Center for High-Energy Physics (Director: Professor T. D. Lee), Peking University, China, August 13 – September 14, 2012
<http://rhep.pku.edu.cn/workshop/fpwm2012/>
33. Co-convener of QCD Evolution Workshop 2012, Jefferson Lab, Newport News, VA, May 14–17, 2012
<http://www.jlab.org/conferences/qcd2012/index.html>
34. Co-organizer of RIKEN BNL Research Center Workshop: Opportunities for Drell-Yan Physics at RHIC, Brookhaven National Laboratory, Upton, NY, May 11–13, 2011
<http://www.bnl.gov/dpworkshop/>

Diversity, outreach and training

Diversity and Inclusion

1. “California Bridge to the Electron-Ion Collider (EIC): Building a Diverse Workforce for Nuclear Physics Research at the EIC”, a grant awarded by Department of Energy, Office of Science, a collaboration among UCLA, UC Riverside, Lawrence Berkeley and Livermore National Labs, and Cal-Bridge Program – we train two URM or female undergraduates each year, 01/2022 - 01/2024

2. Deputy Director, Physics Graduate Bridge Program, 2021/22
3. Member of UCLA-APS Physics Bridge Admissions Committee, 2020/21
4. Member of Department Diversity, Equity and Inclusion Committee, 2019/20, 2020/21

Specialized training

1. The Future of Public Engagement with Basic Science: Community Feedback
SciPEP (Science Public Engagement Partnership), The Department of Energy's Office of Science and The Kavli Foundation, March 2, 2022.
2. The second joint Virtual IGEN Bridge Department Leaders Meeting
Organized by Inclusive Graduate Education Network (IGEN), connecting with Bridge Department leaders from the geosciences, physics and the chemical sciences, share information by leveraging the INCLUDES National Network and receive information and engage in discussion on how they can better support the Fellows in their programs, October 27, 2021
3. CEILS 2021 Annual Faculty Workshop on Best Equitable Practices in Teaching
UCLA Center for Education Innovation & Learning in the Sciences (CEILS), September 14–15, 2021
4. 2019 Faculty Workshop on Best Practices in Teaching
UCLA Center for Education Innovation & Learning in the Sciences (CEILS), September 19, 2019

Outreach

1. Presented a talk “Quantum Computing for Quantum Chromodynamics” to undergraduate students at UCLA Society of Physics Students (SPS), UCLA, February 23, 2022
2. Presented a science talk “Fundamental Structure of Matter” at Exploring Your Universe, the largest UCLA outreach event, November 7, 2021. See the Youtube video here.
3. Led a booth “Nuclear and Particle Physics” for Exploring Your Universe, the largest UCLA outreach event, November 7, 2021.
We showed cosmic ray detector, cloud chamber, and 3D simulations for Electron Ion Collider.
4. Presented a public lecture: “Strong Force - The structure of matter: from Rutherford's experiment to Electron-Ion Collider” at Adventures in Particle Physics Outreach Program organized by University of Stavanger (Norway), for the XIVth Quark Confinement and the Hadron Spectrum Conference, August 6, 2021. See the YouTube video here.
5. Presented a talk “Physics of Strong Interaction” to undergraduate students at UCLA Society of Physics Students (SPS), UCLA, February 23, 2021
6. Made a presentation and participated in the event, “Exposure to the Fields of Research”, organized by UCLA Life Science Student Association (LSSA), November 20, 2020
7. Developed and led a booth “Nuclear and Particle Physics” for Exploring Your Universe, the largest UCLA outreach event, November 1, 2020
We showed cloud chamber+DIY video, Geiger counter to measure radiation, how to understand smoke detector, and a video for Large Hadron Collider, answered questions related to dark matter, neutrino, etc.
8. Presented a talk on “research and how to do research as an undergrad” to undergraduate students at UCLA Society of Physics Students (SPS), UCLA, January 22, 2019

9. Participated on a delegation for a visit to Capitol Hill on the “EIC hill day”, to convey the excitement and importance of the physics of a future Electron-Ion Collider (EIC) facility, organized by EIC User Group, December 4, 2018
10. Serve as a faculty member for Joint Research Institute in Science and Engineering by Peking University and UCLA, since March 2017
11. Poster judge, 13th Annual Student Symposium – “Championing Scientific Careers”, undergraduate students, Los Alamos National Laboratory, Los Alamos, NM, July 26, 2013

Departmental/University Service

◇ UCLA

- Chair of Department IT Committee, 2021/22
- Member of Physical Science Division IT restructuring committee, 2022
- Member of Department IT Committee, 2018/19, 2019/20, 2020/21
- Deputy Director, Physics Graduate Bridge Program, 2021/22
- Member of UCLA-APS Physics Bridge Admissions Committee, 2020/21
- Faculty Career Development Award Selection Committee, 2021/22
- Member of Department Resources Committee, 2021/22
- Member of Physics Comprehensive Exam Committee, 2021/22
- Member of Department Academic Affairs Committee, 2020/21
- Member of Physics Undergraduate Curriculum Review (PUCR) committee, 2020/21
- Member of Department Physics Graduate Admissions Committee, 2019/20
- Member of Department Diversity, Equity and Inclusion Committee, 2019/20, 2020/21
- Undergraduate Research Scholars Program (URSP) Review/Selection Committee, 2019/20, 2020/21, 2021/22
- Undergraduate Research Fellows Program (URFP) Review/Selection Committee, 2018/19, 2019/20, 2020/21, 2021/22
- Member of Department Colloquium Committee, 2017/18
- Legislative Assembly Representative to the Academic Senate, 2017/18, 2018/19

◇ Previously

- Seminar organizer for group T-2, June 2013 – August 2015
Group T-2 (Nuclear and Particle Physics, Astrophysics and Cosmology)
Theoretical Division, Los Alamos National Laboratory
- Organizer for RIKEN lunch seminar, September 2011 – March 2012
RIKEN BNL Research Center, Brookhaven National Laboratory
- Member of Nuclear Theory / RIKEN seminar committee, October 2010 – September 2011
Physics Department, Brookhaven National Laboratory

Teaching Experience

1. Physics 1C: Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity, winter quarter 2022
2. Physics 124: A Modern Introduction to Nuclear Physics, fall quarter 2021
3. Physics 1C: Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity, spring quarter 2021
4. Physics 124: A Modern Introduction to Nuclear Physics, fall quarter 2020
5. Physics 1C: Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity, spring quarter 2020
6. Physics 1C: Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity, winter quarter 2020
7. Physics 124: A Modern Introduction to Nuclear Physics, fall quarter 2019
8. Physics 124: A Modern Introduction to Nuclear Physics, fall quarter 2018
9. Physics 115A: Quantum Mechanics, spring quarter 2018
10. Physics 110B: Electricity and Magnetism, spring quarter 2018
11. Physics 1C: Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity, winter quarter 2018
12. Physics 124: A Modern Introduction to Nuclear Physics, fall quarter 2017
13. Physics 124: A Modern Introduction to Nuclear Physics, winter quarter 2017
14. For invited school lectures on research topics, please refer to “Invited lectures” under the category “Talks” below.
15. Teaching Assistant, recitation, General Physics, Iowa State University, Spring 2007, Summer 2008
16. Teaching Assistant, Introductory Physics Laboratories in both general and classical physics, Iowa State University, Fall 2003, Spring 2004, Spring 2007
17. Teaching Assistant, first-year graduate course “Advanced Electricity and Magnetism”, Iowa State University, Fall 2004, Spring 2005
18. Instructor for first-year graduate course “Advanced Quantum Mechanics”, Central China Normal University, Wuhan, China, Spring 2002

Publications

Letters (PRL, PLB, and Rapid Communications)

1. “Three-dimensional imaging in nuclei”
M. Alrashed, D. Anderle, Z. B. Kang, J. Terry and H. Xing, [arXiv:2107.12401 [hep-ph]].
2. “Transverse Λ Polarization in e^+e^- collisions”
L. Gamberg, Z. B. Kang, D. Y. Shao, J. Terry and F. Zhao, *Phys. Lett. B* **818**, 136371 (2021) [arXiv:2102.05553 [hep-ph]].

3. “Electron-Ion Collider impact study on the tensor charge of the nucleon”
L. Gamberg, Z. B. Kang, D. Pitonyak, A. Prokudin, N. Sato and R. Seidl, *Phys. Lett. B* **816**, 136255 (2021) [arXiv:2101.06200 [hep-ph]].
4. “A global extraction of the jet transport coefficient in cold nuclear matter”
P. Ru, Z. B. Kang, E. Wang, H. Xing and B. W. Zhang, *Phys. Rev. D* **103**, L031901 (2021) [arXiv:1907.11808 [hep-ph]].
5. “Jet Charge: A Flavor Prism for Spin Asymmetries at the EIC”
Z. B. Kang, X. Liu, S. Mantry and D. Y. Shao, *Phys. Rev. Lett.* **125**, 242003 (2020) [arXiv:2008.00655 [hep-ph]].
6. “Polarized jet fragmentation functions”
Z. B. Kang, K. Lee and F. Zhao, *Phys. Lett. B* **809**, 135756 (2020) [arXiv:2005.02398 [hep-ph]].
7. “Threshold Resummation for Hadron Production in the Small- x Region”
H. Y. Liu, Z. B. Kang and X. Liu, *Phys. Rev. D* **102**, 054002(R) (2020) [arXiv:2004.11990 [hep-ph]].
8. “Jet fragmentation functions for Z -tagged jets”
Z. B. Kang, K. Lee, J. Terry and H. Xing, *Phys. Lett. B* **798**, 134978 (2019) [arXiv:1906.07187 [hep-ph]].
9. “A transverse momentum dependent framework for back-to-back photon+jet production”
M. G. A. Buffing, Z. B. Kang, K. Lee and X. Liu, [arXiv:1812.07549 [hep-ph]].
10. “Soft drop groomed jet angularities at the LHC”
Z. B. Kang, K. Lee, X. Liu and F. Ringer, *Phys. Lett. B* **793**, 41 (2019) [arXiv:1811.06983 [hep-ph]].
11. “Collins azimuthal asymmetries of hadron production inside jets”
Z. B. Kang, A. Prokudin, F. Ringer and F. Yuan, *Phys. Lett. B* **774**, 635 (2017) [arXiv:1707.00913 [hep-ph]].
12. “ J/ψ production and polarization within a jet”
Z. B. Kang, J. W. Qiu, F. Ringer, H. Xing and H. Zhang, *Phys. Rev. Lett.* **119**, 032001 (2017) [arXiv:1702.03287 [hep-ph]].
13. “Phenomenological constraints on A_N in $p^\uparrow p \rightarrow \pi X$ from Lorentz invariance relations”
L. Gamberg, Z. B. Kang, D. Pitonyak and A. Prokudin, *Phys. Lett. B* **770**, 242 (2017) [arXiv:1701.09170 [hep-ph]].
14. “Inclusive production of small radius jets in heavy-ion collisions”
Z. B. Kang, F. Ringer and I. Vitev, *Phys. Lett. B* **769**, 242 (2017) [arXiv:1701.05839 [hep-ph]].
15. “Unveiling the nucleon tensor charge at Jefferson Lab: A study of the SoLID case”
Z. Ye, N. Sato, K. Allada, T. Liu, J. P. Chen, H. Gao, Z. B. Kang *et al.*, *Phys. Lett. B* **767**, 91 (2017) [arXiv:1609.02449 [hep-ph]].
16. “Photon-tagged and B-meson-tagged b-jet production at the LHC”
J. Huang, Z. B. Kang, I. Vitev and H. Xing, *Phys. Lett. B* **750**, 287 (2015) [arXiv:1505.03517 [hep-ph]].
17. “Quasi-parton distribution functions: a study in the diquark spectator model”
L. Gamberg, Z. B. Kang, I. Vitev and H. Xing, *Phys. Lett. B* **743**, 112 (2015) [arXiv:1412.3401 [hep-ph]].

18. “Nucleon Tensor Charge from Collins Azimuthal Asymmetry Measurements”
Z. B. Kang, A. Prokudin, P. Sun and F. Yuan, *Phys. Rev. D* **91**, 071501(R) (2015) [arXiv:1410.4877 [hep-ph]].
19. “Multiple scattering effects on heavy meson production in p+A collisions at backward rapidity”
Z. B. Kang, I. Vitev, E. Wang, H. Xing and C. Zhang, *Phys. Lett. B* **740**, 23 (2015) [arXiv:1409.2494 [hep-ph]].
20. “Jet quenching phenomenology from soft-collinear effective theory with Glauber gluons”
Z. B. Kang, R. Lashof-Regas, G. Ovanesyan, P. Saad and I. Vitev, *Phys. Rev. Lett.* **114**, 092002 (2015) [arXiv:1405.2612 [hep-ph]].
21. “Next-to-leading order forward hadron production in the small- x regime: the role of rapidity factorization”
Z. B. Kang, I. Vitev and H. Xing, *Phys. Rev. Lett.* **113**, 062002 (2014) [arXiv:1403.5221 [hep-ph]].
22. “Next-to-leading order QCD factorization for semi-inclusive deep inelastic scattering at twist-4”
Z. B. Kang, E. Wang, X. N. Wang and H. Xing, *Phys. Rev. Lett.* **112**, 102001 (2014) [arXiv:1310.6759 [hep-ph]].
23. “Inclusive b-jet production in heavy ion collisions at the LHC”
J. Huang, Z. B. Kang and I. Vitev, *Phys. Lett. B* **726**, 251 (2013) [arXiv:1306.0909 [hep-ph]].
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Z. B. Kang and J. W. Qiu, *Int. J. Mod. Phys. Conf. Ser.* **20**, 118 (2012) [arXiv:1210.4103 [hep-ph]].
32. “Process dependence and spin asymmetries in hadronic reactions”
L. Gamberg and Z. B. Kang, *Nuovo Cim. C* **035N2**, 151 (2012).
33. “Scale dependence of twist-3 correlation functions”
Z. B. Kang and J. W. Qiu, *Int. J. Mod. Phys. Conf. Ser.* **04**, 146 (2011).

34. “Factorization and quarkonium production”
Z. B. Kang, J. W. Qiu and G. Sterman, *Nucl. Phys. Proc. Suppl.* **214**, 39 (2011).
35. “Low-mass dilepton production in pp and AA collisions”
Z. B. Kang, J. W. Qiu and W. Vogelsang, *Nucl. Phys. A* **830**, 571 (2009) [arXiv:0907.4498 [hep-ph]].
36. “Trigluon correlations and single transverse spin asymmetry in open charm production”
Z. B. Kang and J. W. Qiu, *AIP Conf. Proc.* **1149**, 443 (2009) [arXiv:0901.2539 [hep-ph]].
37. “QCD resummation for heavy quarkonium production in high energy collisions”
Z. B. Kang and J. W. Qiu, *AIP Conf. Proc.* **1056**, 170 (2008).
38. “Transverse momentum broadening of vector bosons in heavy ion collisions at the LHC”
Z. B. Kang and J. W. Qiu, arXiv:0707.0276 [hep-ph].
39. “Nuclear modification to parton distribution functions and parton saturation”
Z. B. Kang and J. W. Qiu, *J. Phys. G* **34**, S607 (2007) [arXiv:hep-ph/0702040].

Book chapters, white papers and contributions

40. “Science Requirements and Detector Concepts for the Electron-Ion Collider: EIC Yellow Report”
R. Abdul Khalek, A. Accardi, J. Adam, D. Adamiak, W. Akers, M. Albaladejo, A. Al-bataineh, M. G. Alexeev, F. Ameli and P. Antonioli, *et al.*, [arXiv:2103.05419 [physics.ins-det]].
41. “Probing Nucleons and Nuclei in High Energy Collisions”
C. A. Aidala *et al.*, *Proceedings, Probing Nucleons and Nuclei in High Energy Collisions: Dedicated to the Physics of the Electron Ion Collider: Seattle (WA), United States, October 1 - November 16, 2018*, [arXiv:2002.12333 [hep-ph]].
42. “Dark Sectors 2016 Workshop: Community Report”
J. Alexander *et al.*, arXiv:1608.08632 [hep-ph].
43. “The RHIC Cold QCD Plan for 2017 to 2023: A Portal to the EIC”
E. C. Aschenauer, C. Aidala, A. Bazilevsky, M. Diehl, R. Fatemi, C. Gagliardi and Z. B. Kang *et al.*, arXiv:1602.03922 [nucl-ex].
44. “The RHIC SPIN Program: Achievements and Future Opportunities”
E. C. Aschenauer, A. Bazilevsky, M. Diehl, J. Drachenberg, K. O. Eyser, R. Fatemi, C. Gagliardi and Z. B. Kang *et al.*, arXiv:1501.01220 [nucl-ex].
45. “The RHIC Spin Program: Achievements and Future Opportunities”
E. C. Aschenauer, A. Bazilevsky, K. Boyle, K. O. Eyser, R. Fatemi, C. Gagliardi, M. Grosse-Perdekamp and J. Lajoie *et al.*, arXiv:1304.0079 [nucl-ex].
46. “Gluons and the quark sea at high energies: distributions, polarization, tomography”
D. Boer *et al.*, arXiv:1108.1713 [nucl-th].

Talks

Invited lectures

1. “Strong Force - the structure of matter: from Rutherford to Electron-Ion Collider”
Public lecture (one hour), at Adventures in Particle Physics Outreach Program organized by University of Stavanger (Norway), for the XIVth Quark Confinement and the Hadron Spectrum Conference, August 6, 2021. See the YouTube video here.

2. “EIC Project and Physics: Overview”
One lecture (one and a half hours), online, 2021 Collider Physics Phenomenology Summer School hosted by Beijing Normal University and Shandong University, July 17, 2021.
3. “Three-dimensional structure of the nucleon”
Three lectures (one and a half hours each) + one tutorial session (one hour), 2019 CFNS Summer School on the Physics of the Electron Ion Collider, Stony Brook, NY, August 1–2, 2019.
4. “Introduction to pQCD and TMD physics”
Four lectures (one-hour each), Spinfest 2016, University of California, Riverside, CA, July 25–26, 2016.
5. “QCD structure of the nucleon and spin physics”
Six lectures (one-hour each), The 30th Annual Hampton University Graduate Studies Program (HUGS 2015 Summer School), organized by Jefferson Lab, Newport News, VA, June 1–19, 2015.
6. “Introduction to pQCD and jets”
Three lectures (one-hour each), DOE JET Topical Collaboration Summer School, University of California, Davis, CA, June 19–21, 2014.
7. “QCD and transverse spin physics”
Five lectures (one-hour each), PHENIX Spin Work Fest 2012 Summer School, organized by PHENIX experimental collaboration at RHIC at Brookhaven National Laboratory, University of New Mexico, Albuquerque, NM, July 9–13, 2012.

Panelist/Discussant

1. Co-moderator for round-table discussion: “Parton shower and SCET approach in medium”
“Week 2: Parton shower in high density matter” of the INT program: Probing QCD at High Energy and Density with Jets, Institute for Nuclear Theory, University of Washington, Seattle, WA, August 2–6, 2021. Moderators: Edmond Iancu (Institute de Physique Theorique) and Zhong-Bo Kang (UCLA).
2. Panelist in a panel discussion – plenary round-table discussion: “EIC Physics”
Quark Confinement and the Hadron Spectrum 2021 (online), August 2–6, 2021. Panel members: Jian-Wei Qiu (moderator, JLab), Zhong-Bo Kang (UCLA), Peter Petreczky (BNL), Ignazio Scimemi (Universidad Complutense de Madrid).
3. Panelist in a panel discussion: “Future plans of pp/pA program at RHIC”
Spin and Proton Structure Workshop, 2017 RHIC and AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton, NY, June 20–23, 2017. Panel members: Elke-Caroline Aschenauer (BNL), Zhong-Bo Kang (UCLA), John Lajoie (ISU), Rodolfo Sassot (Buenos Aires U.), Matthew Sievert (LANL).
4. Panelist in a panel discussion: “QCD tools for future ep/eA colliders”
Joint CTEQ Meeting and POETIC 7 (7th International Conference on Physics Opportunities at an Electron-Ion-Collider), Temple University, Philadelphia, PA, November 14–18, 2016. Panel members: Frank Petriello (moderator, Northwestern), Zhong-Bo Kang (UCLA), Christopher Lee (LANL), Stefan Prestel (SLAC), Pavel Nadolsky (SMU).
5. “EIC discussion: just questions”, Round Table Discussion: Sharpening the case for the EIC
2014 Electron Ion Collider Users Meeting, Stony Brook University, Stony Brook, NY, June 24–27, 2014.

Invited talks

1. “Jet physics: a new frontier in strong interactions”
Physics and Astronomy Colloquium, Department of Physics and Astronomy, California State University, Los Angeles, February 17, 2022.
2. “SCET and small- x physics: comments and ideas”
RIKEN BNL Research Center Workshop: Small- x Physics in the EIC Era, Brookhaven National Laboratory, December 15–17, 2021.
3. “Transverse Momentum Distributions in nucleons”
The 14th European Research Conference On Electromagnetic Interactions with Nucleons and Nuclei (EINN 2021), October 31–November 6, 2021.
4. “Quantum 3D imaging of hadrons”
Nuclear Theory Seminar, University of Maryland, November 4, 2021.
5. “Jet substructure observables”
Fragmentation Functions 2021 Workshop, Institute for Nuclear Theory, University of Washington, Seattle, November 1–5, 2021.
6. “Jets for nucleon structure”
The 5th Workshop on the QCD Structure of the Nucleon (QCD-N2021), Madrid, Spain, October 4–8, 2021.
7. “Jets for 3D imaging”
Jet Probes of Hot and Cold Nuclear Matter: From the LHC and RHIC to the EIC, Embedded Workshop of the INT program: Probing QCD at High Energy and Density with Jets, Institute for Nuclear Theory, University of Washington, Seattle, WA, August 9–13, 2021.
8. “Theory of transverse/forward spin physics at RHIC”
Workshop: RHIC Science Programs Informative Toward EIC in the Coming Years, May 24–26, 2021.
9. “Quantum 3D imaging of hadrons with jets”
Center for Frontiers in Nuclear Science (CFNS) seminar, Stony Brook University, February 4, 2021.
10. “Theory aspects of EIC jets”
Snowmass Energy Frontier 06/07 meeting: Jets at the Electron Ion Collider, November 9, 2020.
11. “TMD opportunities at the LHC”
Snowmass Energy Frontier 06/07 meeting: TMD jamboree, October 28, 2020.
12. “Jets for 3D imaging”
High-energy Nuclear Physics in China (HENPIC) online seminar, August 12, 2020.
13. “QCD factorization and resummation in the small- x regime”
Nuclear Theory/RIKEN Seminar, Brookhaven National Laboratory, Upton, NY, July 31, 2020.
14. “Small- x physics and gluon saturation”
LPC Workshop on Physics Connections between the LHC and EIC, Fermilab, Batavia, IL, November 13–15, 2019.
15. “QCD phenomenology: bridging perturbative and non-perturbative physics”
QCD Spin Physics: A Symposium to Honor Jacques Soffer, RIKEN BNL Research Center, Brookhaven National Laboratory, Upton, NY, October 3–4, 2019.

16. “Recent progress on jet substructure theory”
XLIX International Symposium on Multiparticle Dynamics (ISMD 2019), Santa Fe, NM, September 9–13, 2019.
17. “Overview of TMDs”
11th Workshop on Hadron Physics in China and Opportunities Worldwide, Nankai University, Tianjin, China, August 23–28, 2019.
18. “EIC Physics in US”
18th International Conference on Hadron Spectroscopy and Structure (HADRON2019), Guilin, China, August 16–21, 2019.
19. “Overview and recent progress on TMDs”
Lead talk, 18th International Conference on Hadron Spectroscopy and Structure (HADRON2019), Guilin, China, August 16–21, 2019.
20. “Groomed jet substructure observables”
LoopFest XVIII conference, Fermilab, Batavia, IL, August 12–14, 2019.
21. “Novel opportunities for transverse momentum dependent distributions”
Theory Seminar, Jefferson Lab, Newport News, VA, July 1, 2019.
22. “Recent developments in jet substructure theory”
7th Edition of the Large Hadron Collider Physics Conference (LHCP 2019), Puebla, Mexico, May 20–25, 2019.
23. “TMD opportunities beyond the standard processes”
QCD Evolution Workshop 2019, Argonne National Laboratory, Lemont, IL, May 13–17, 2019.
24. “Jet substructure with and without grooming”
13th International Workshop on High- p_T Physics in the RHIC/LHC era, Knoxville, TN, March 19–22, 2019.
25. “Physics with an Electron Ion Collider”
35th Winter Workshop on Nuclear Dynamics, Beaver Creek, CO, January 6–12, 2019.
26. “The renaissance of jet physics in strong interactions”
Physics Colloquium, New Mexico State University, Las Cruces, NM, November 29, 2018.
27. “EIC Physics in US”
QCD and Quark Matter Physics, South China Normal University, Guangzhou, China, November 12, 2018
28. “Quantum tomography of a proton”
Physics and Astronomy Colloquium, California State University, Los Angeles, CA, November 8, 2018.
29. “Inclusive jets and their substructure at the LHC”
SLAC Elementary Particle Physics (EPP) Theory Seminar, SLAC National Accelerator Laboratory, Menlo Park, CA, September 21, 2018.
30. “Jets as a probe of transverse spin physics”
Nuclear Theory/RIKEN Seminar, Brookhaven National Laboratory, Upton, NY, July 27, 2018.
31. “Review: jets in ep/eA DIS”
Overview talk, 2018 Workshop on Probing Quark-Gluon Matter with Jets, Brookhaven National Laboratory, Upton, NY, July 23–25, 2018.

32. “Jet functions”
2018 JETSCAPE Winter School and Workshop, Lawrence Berkeley National Laboratory, Berkeley, CA, January 3–7, 2018.
33. “Opportunities: heavy flavor production in p+p and EIC”
2017 Heavy Flavor Workshop in High Energy Collisions, Lawrence Berkeley National Laboratory, Berkeley, CA, October 30–November 1, 2017.
34. “Heavy flavor production in p+p and A+A collisions”
Lead talk in the heavy flavor session, 2017 Fall Meeting of the APS Division of Nuclear Physics, Pittsburgh, PA, October 25–28, 2017.
35. “Inclusive jets and their substructure at the LHC”
IOPP Forum, Institute of Particle Physics, Central China Normal University, Wuhan, China, September 20, 2017.
36. “QCD multiple scattering in cold nuclear matter”
2017 Meeting of the APS Division of Particles and Fields (DPF 2017), Fermilab, Batavia, IL, July 31–August 4, 2017.
37. “Phenomenological extractions of TMDs: progress and new opportunities”
Electron Ion Collider User Group Meeting 2017, Trieste, Italy, July 18–22, 2017.
38. “TMDs: general and fits”
The 2nd meeting of TMD Collaboration, DOE Topical Collaboration for the Coordinated Theoretical Approach to Transverse Momentum Dependent Hadron Structure in QCD (TMD Collaboration), Temple University, Philadelphia, PA, June 29–30, 2017.
39. “Hadron distribution inside jets for hadronization and spin dynamics”
RIKEN BNL Workshop - Synergies of pp and pA Collisions with an Electron-Ion Collider, Brookhaven National Laboratory, Upton, NY, June 26–28, 2017.
40. “Overview: jet production in p+p and A+A collisions”
2017 RHIC and AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton, NY, June 20–23, 2017.
41. “Introduction to TMD physics”
12th particle physics phenomenology workshop (PPP12), National Chiao Tung University, Hsinchu, Taiwan, May 16–19, 2017.
42. “Inclusive jets and their substructure at the LHC”
Seminar, Institute of Physics, Academia Sinica, Taipei, Taiwan, May 12, 2017.
43. “Effective field theory approach to open heavy flavor production in heavy-ion collisions”
25th International Workshop on Deep Inelastic Scattering and Related Topics (DIS 2017), Birmingham, UK, April 3–7, 2017.
44. “Probing collinear and TMD fragmentation functions through hadron distribution inside the jet”
7th Workshop of the APS Topical Group on Hadronic Physics (GHP 2017), Washington, DC, February 1–3, 2017.
45. “TMDs at an EIC”
Plenary talk, Joint CTEQ Meeting and 7th International Conference on Physics Opportunities at an EIC (POETIC 7), Temple University, Philadelphia, PA, November 14–18, 2016.
46. “How advances in pQCD help us understand QGP?”
Recent RHIC and LHC results and their implications for heavy ion physics in the 2020’s, Massachusetts Institute of Technology, Cambridge, MA, October 28–29, 2016.

47. “Inclusive jets and jet substructure for QCD and spin dynamics”
Advances in QCD and Applications to Hadron Colliders Workshop, Argonne National Laboratory, Lemont, IL, October 26–28, 2016.
48. “Phenomenology of TMD evolution: recent progress”
The 22nd International Spin Symposium (Spin 2016), University of Illinois at Urbana-Champaign, Champaign, IL, September 25–30, 2016.
49. “Jets and jet substructure for inclusive jet production at the LHC”
INT special seminar, Institute for Nuclear Theory, University of Washington, Seattle, WA, August 3, 2016.
50. “Spin physics of Sivers, Collins, pA, and jets”
2016 RHIC and AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton, NY, June 7–10, 2016.
51. “QCD frontiers in high energy nuclear physics: quantum correlation and many-body dynamics”
High Energy and Astro-Particle (HEAP) seminar, Department of Physics and Astronomy, University of California, Los Angeles, CA, May 25, 2016.
52. “Recent progress on TMD study and future perspective at the EIC”
International Conference on the Structure of Baryons (Baryons 2016), Tallahassee, Florida, May 16–20, 2016.
53. “TMDs: Theory overview”
APS April Meeting 2016, Salt Lake City, Utah, April 16–19, 2016.
54. “Opportunities in hadron distribution inside the jet”
RIKEN BNL Workshop on Emerging Spin and Transverse Momentum Effects in p+p and p+A Collisions, Brookhaven National Laboratory, Upton, NY, February 8–10, 2016.
55. “Recent developments in NLO corrections to in-medium jets”
Plenary talk, 7th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions (Hard Probes 2015), McGill University, Montreal, Canada, June 29–July 3, 2015.
56. “SCET approach to energy loss”
Symposium on Jet and Electromagnetic Tomography of Dense Matter, McGill University, Montreal, Canada, June 26–27, 2015.
57. “Transverse single spin asymmetry of the W production at RHIC”
2015 RHIC and AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton, NY, June 9–12, 2015.
58. “TMD evolution and global analysis”
6th Workshop of the APS Topical Group on Hadronic Physics, Baltimore, MD, April 8–10, 2015.
59. “Advances in the determination of TMDs from global analysis”
E1039/E906 Collaboration Meeting 2015, Santa Fe, NM, February 11–13, 2015.
60. “Unique opportunities in p+A collisions at RHIC and LHC”
Phases of QCD Matter, APS Division of Nuclear Physics 2014 Long-range plan: Joint Town Meetings on QCD, Philadelphia, PA, September 13–15, 2014.
61. “Energy loss and heavy flavor jet production”
3rd Workshop on Jet Modification in the RHIC and LHC Era, Wayne State University, Detroit, MI, August 18–20, 2014.

62. “QCD new frontiers for studying nucleon structure”
Nuclear Theory Seminar, Jefferson Lab, Newport News, VA, July 25, 2014.
63. “QCD new frontiers for studying nucleon structure”
Physics Colloquium, Department of Physics, Old Dominion University, Norfolk, VA, July 24, 2014.
64. “Nucleon spin: longitudinal, transverse, and evolution”
Theory overview, 2014 RHIC and AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton, NY, June 17–20, 2014.
65. “Discussion on NLO energy loss: questions, thoughts, and motivations”
Workshop on NLO Energy Loss, Lawrence Berkeley National Laboratory, Berkeley, CA, March 3–14, 2014.
66. “TMD evolution of Sivers asymmetry”
Institute for Nuclear Theory Workshop - Studies of 3D Structure of Nucleon, Institute for Nuclear Theory, Seattle, WA, February 24–28, 2014.
67. “Forward physics from a theoretical perspective”
Theory overview, Forward sPHENIX Workshop at Santa Fe, Organized by PHENIX experimental group at RHIC, Santa Fe, NM, February 19, 2014.
68. “Universality and evolution of Sivers effect”
Nuclear Physics & RIKEN Theory Seminar, Brookhaven National Laboratory, Upton, NY, February 7, 2014.
69. “A unified picture of parton multiple scattering in the small- x regime”
Physics Seminar, Department of Natural Sciences, Baruch College, New York, NY, February 3, 2014.
70. “QCD evolution of TMDs: what works?”
Indiana-Illinois Workshop on Fragmentation Functions, Indiana University, Bloomington, IN, December 12–14, 2013.
71. “Heavy flavor production in heavy ion collisions”
High Energy Physics Seminar, University of Illinois at Chicago, Chicago, IL, November 11, 2013.
72. “TMDs: Mechanism/universality with ep and pp collisions”
QCD Frontier 2013, Jefferson Lab, Newport News, VA, October 21–22, 2013.
73. “Forward physics from a theoretical perspective”
Theory overview, STAR Meeting on eSTAR Letter of Intent, Forward-Upgrades and Results from U+U Collisions, University of California, Los Angeles, CA, August 28–30, 2013.
74. “Parton multiple scattering and small- x physics”
Berkeley Summer Program 2013, QCD Landscape of the Nucleon and Atomic Nuclei, Lawrence Berkeley National Laboratory, Berkeley, CA, August 12–16, 2013.
75. “Double parton fragmentation function and its evolution in quarkonium production”
QCD Evolution Workshop 2013, Jefferson Lab, Newport News, VA, May 6–10, 2013.
76. “Single transverse spin asymmetries in polarized SIDIS and pp scattering”
Plenary talk, 5th Workshop of the APS Topical Group on Hadronic Physics, Denver, CO, April 10–12, 2013.
77. “Exploring new frontiers of Quantum Chromodynamics”
Seminar, Department of Physics, Temple University, Philadelphia, PA, January 23, 2013.

78. “Polarized p+A, single spin asymmetries”
BNL-LANL-RBRC Joint Workshop on The Physics of p+A Collisions at RHIC, Brookhaven National Laboratory, Upton, NY, January 7–9, 2013.
79. “Cold nuclear matter effects on dilepton and photon production”
Thermal Radiation Workshop (2012), RIKEN BNL Research Center, Brookhaven National Laboratory, Upton, NY, December 5–7, 2012.
80. “Introduction on spin-dependent fragmentation function and evolution of TMDs”
Workshop on Fragmentation Functions and QCD 2012 (Fragmentation 2012), RIKEN Wako, Japan, November 9–11, 2012.
81. “QCD and RHIC spin physics”
Theory overview of spin physics, 2012 Fall Meeting of the APS Division of Nuclear Physics, Newport Beach, CA, October 24–27, 2012.
82. “QCD evolution and resummation for spin-dependent parton distribution functions”
Medium/High Energy Seminar, Department of Physics, University of Illinois at Urbana-Champaign, October 1, 2012.
83. “Sivers effect of Drell-Yan production in small- x regime”
RIKEN BNL Workshop - Forward Physics at RHIC, RIKEN BNL Research Center, Brookhaven National Laboratory, Upton, NY, July 30–August 1, 2012.
84. “Recent progress in spin physics: Theoretical overview”
2012 RHIC and AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton, NY, June 12–15, 2012.
85. “Correlation measurements in pp/pA”
STAR Upgrade Workshop, Brookhaven National Laboratory, Upton, NY, June 11, 2012.
86. “QCD evolution and resummation for transverse momentum distribution”
QCD Evolution Workshop 2012, Jefferson Lab, Newport News, VA, May 14–17, 2012.
87. “QCD new frontiers for studying nucleon structure”
Theoretical Physics Seminar, Physics Division, Argonne National Laboratory, Argonne, IL, April 17, 2012.
88. “Multiple scattering effects in high energy nuclear collisions”
Nuclear Physics Seminar, Department of Physics, Temple University, Philadelphia, PA, April 13, 2012.
89. “Exploring new frontiers of Quantum Chromodynamics”
Physics colloquium, Department of Physics, Kent State University, Kent, OH, February 23, 2012.
90. “Orbital angular momentum in collinear factorization: Does A_N come from parton orbital motion?”
Institute for Nuclear Theory workshop - Orbital angular momentum in QCD, Institute for Nuclear Theory, Seattle, WA, February 6–17, 2012.
91. “Spin structure of the proton”
Charles A. Whitten Memorial Symposium on Frontier of Nuclear Physics, University of California, Los Angeles, CA, December 15–16, 2011.
92. “Unraveling the transverse structure of nucleons with p+He-3 and e+He-3”
Workshop on opportunities for polarized He-3 in RHIC and EIC, Brookhaven National Laboratory, Upton, NY, September 28–30, 2011.

93. “Spin physics: transverse theory and overview”
Theory overview, 2011 RHIC and AGS Annual Users’ Meeting, Brookhaven National Laboratory, Upton, NY, June 20–24, 2011.
94. “Sivers effect: from SIDIS to pp - sign change and sign mismatch”
RIKEN BNL Workshop - Opportunities for Drell-Yan Physics at RHIC, Brookhaven National Laboratory, Upton, NY, May 11–13, 2011.
95. “Spin physics: past, present and future”
Colloquium, Theoretical Division (Group T-2), Los Alamos National Laboratory, Los Alamos, NM, April 25, 2011.
96. “Sivers effect in SIDIS and pp collisions”
XIX International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2011), Newport News, VA, April 11–15, 2011.
97. “QCD and transverse spin physics”
Joint Experiment and Theory Seminar (Group P-25 and T-2), Los Alamos National Laboratory, Los Alamos, NM, April 04, 2011.
98. “Single transverse spin asymmetry: progress and puzzles ”
Nuclear Physics Seminar, Department of Physics, University of Maryland, College Park, MD, March 30, 2011.
99. “QCD factorization and heavy quarkonium production”
Nuclear Theory Seminar, Lawrence Berkeley National Laboratory, Berkeley, CA, March 24, 2011.
100. “Sivers effect in SIDIS and pp collisions”
Nuclear Physics Seminar, Department of Physics, Temple University, Philadelphia, PA, March 08, 2011.
101. “QCD and spin physics - explore the nucleon using spin”
Nuclear Seminar, Department of Physics, Indiana University, Bloomington, IN, February 28, 2011.
102. “Single transverse spin asymmetry: progress and puzzles”
Nuclear Theory Seminar, Jefferson Lab, Newport News, VA, February 07, 2011.
103. “Scale evolution for the correlations (TMD moments)”
Institute for Nuclear Theory Program - Gluons and the quark sea at high energies: distributions, polarization, tomography, week 8-9 on *longitudinal and transverse nucleon structure; spin and orbital effects (GPDs, TMDs, and all that)*, Institute for Nuclear Theory, Seattle, WA, November 1–12, 2010.
104. “Recent progress on spin physics”
Theory overview of spin physics, 2010 Fall Meeting of the APS Division of Nuclear Physics, Workshop: Quark Gluon Plasma, Santa Fe, NM, November 2–6, 2010
105. “Process dependent transverse spin asymmetry - understanding inclusive hadron production”
Polarized Drell-Yan Physics Workshop, Santa Fe, NM, October 31–November 1, 2010.
106. “Overview of DIS results, global fitting and DY predictions”
Summary talk, Polarized Drell-Yan Physics Workshop, Santa Fe, NM, October 31–November 1, 2010.
107. “Test of the universality of naive T-odd fragmentation functions”
Institute for Nuclear Theory Program - Gluons and the quark sea at high energies: distributions, polarization, tomography, week 6 on *parton densities (unpolarized and polarized), fragmentation functions, electroweak physics*, Institute for Nuclear Theory, Seattle, WA, October 17–23, 2010.

108. “Single transverse-spin asymmetry in inclusive hadron production”
Brookhaven Summer Program on Nucleon Spin Physics, Brookhaven National Laboratory, Upton, NY, July 14–27, 2010.
109. “ A_N of W production in polarized pp collisions”
The Physics of W and Z Bosons, Brookhaven National Laboratory, Upton, NY, June 24–25, 2010.
110. “Spin physics at RHIC”
Theory overview of spin physics, STAR Analysis Meeting, University of California, Los Angeles, CA, June 15–18, 2010.
111. “Theory predictions for polarized He-3”
RHIC Spin: The Next Decade, Iowa State University, Ames, IA, May 14–16, 2010.
112. “P-odd correlations in quark fragmentation”
P- and CP-odd effects in hot and dense matter, Brookhaven National Laboratory, Upton, NY, April 26–30, 2010.
113. “Evolution of Transverse Momentum Dependent distributions (moments)”
Workshop on Partonic Transverse Momentum in Hadrons: Quark Spin-Orbit Correlations and Quark-Gluon Interactions, Duke University, Durham, NC, March 12–13, 2010.
114. “Some recent progress on single transverse-spin asymmetry”
Nuclear Theory Seminar, Lawrence Berkeley National Laboratory, Berkeley, CA, October 14, 2009.
115. “Single transverse-spin asymmetry (SSA) of W/Z bosons”
Berkeley Summer Program on Nucleon Spin Physics, Berkeley, CA, June 1–12, 2009.
116. “Some recent developments in single transverse-spin asymmetry”
Nuclear Physics Seminar, Temple University, Philadelphia, PA, March 26, 2009.
117. “Collinear factorization approach to single transverse-spin asymmetry”
Nuclear Theory Seminar, Jefferson Lab, Newport News, VA, March 9, 2009.
118. “QCD factorization and its role in understanding high energy nuclear collisions”
Nuclear Theory Seminar, Lawrence Berkeley National Laboratory, Berkeley, CA, January 23, 2009.
119. “QCD and the hadron structure beyond the probability distributions”
T-2 Nuclear Theory Seminar, Los Alamos National Laboratory, Los Alamos, NM, January 6, 2009.

Other talks

120. “Quantum Computing for Quantum Chromodynamics”
Center for Quantum Science and Engineering (CQSE) General Monthly Meeting, University of California, Los Angeles, June 10, 2021.
121. “Electron-Ion Collider impact study on the tensor charge from a QCD global analysis of single transverse-spin asymmetries”
The 9th Workshop of the APS Topical Group on Hadronic Physics (GHP 2021), April 13–16, 2021.
122. “The renaissance of jet physics”
Physics and Astronomy Colloquium, Department of Physics and Astronomy, University of California, Los Angeles, CA, October 22, 2020.
123. “Jet charge: a flavor prism for spin asymmetries at the EIC”
EIC Yellow Report : Jet and Heavy Flavor Physics WG meeting, August 10, 2020.

124. “A TMD framework for photon+jet/dijet production in p+p collisions”
The 3rd meeting of TMD Collaboration, DOE Topical Collaboration for the Coordinated Theoretical Approach to Transverse Momentum Dependent Hadron Structure in QCD (TMD Collaboration), Duke University, Durham, NC, November 2–3, 2018.
125. “Quantum tomography of the nucleons”
Physics and Astronomy Colloquium, Department of Physics and Astronomy, University of California, Los Angeles, CA, March 2, 2017.
126. “Jets and jet substructure: inclusive jet production”
Astro-particle Journal Club, Theory of Elementary Particles, Astroparticle Physics and Phenomenology (TEPAPP group), University of California, Los Angeles, CA, January 25, 2017.
127. “Sivers effect: Aharonov-Bohm effect in QCD?”
Theoretical Division Group Leaders Meeting, Los Alamos National Laboratory, Los Alamos, NM, September 9, 2015.
128. “New QCD frontiers in understanding the nucleon structure”
Nuclear seminar, Theoretical Division, Los Alamos National Laboratory, Los Alamos, NM, November 18, 2013.
129. “QCD new frontiers for studying nucleon structure”
Physics Division Summer Seminar Series, Los Alamos National Laboratory, Los Alamos, NM, July 17, 2013.
130. “Dihadron momentum imbalance and correlations in d+Au collisions”
Parallel talk, The 11th International Conference on Nucleus-Nucleus Collisions (NN2012), San Antonio, TX, May 27–June 1, 2012.
131. “Sivers effect in SIDIS and pp collisions: a sign mismatch”
RHIC Spin Seminar, Brookhaven National Laboratory, Upton, NY, March 29, 2011.
132. “Understanding single transverse spin asymmetry - on universality property of k_T -dependent functions”
RIKEN BNL Center Scientific Review Committee (SRC) Meeting, Brookhaven National Laboratory, Upton, NY, October 27–29, 2010.
133. “Quark fragmentation in parity-odd bubbles”
JET summer school 2010, Lawrence Berkeley National Laboratory, Berkeley, CA, June 14–17, 2010.
134. “Theory for Drell-Yan single transverse spin asymmetry”
PHENIX Forward Upgrade (Next Decade), Brookhaven National Laboratory, Upton, NY, March 26, 2010.
135. “Violation of TMD factorization in hadronic collisions”
RHIC Spin Seminar, Brookhaven National Laboratory, Upton, NY, February 9, 2010.
136. “Some recent progress on single transverse-spin asymmetry”
RIKEN Lunch Seminar, RIKEN BNL Research Center, Brookhaven National Laboratory, Upton, NY, October 1, 2009.
137. “Low mass lepton pair production at large transverse momentum”
Parallel talk, The 21th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (Quark Matter 2009), Knoxville, TN, March 30–April 04, 2009.
138. “QCD and the hadron structure beyond the probability distributions”
Nuclear Theory Seminar, Department of Physics and Astronomy, Iowa State University, Ames, IA, December 11, 2008.

139. “Low mass lepton pair production at large transverse momentum”
2008 CTEQ Collaboration Meeting, Argonne National Laboratory, Argonne, IL, December 5–7, 2008.
140. “Tri-gluon correlation and transverse spin asymmetry for open charm production in SIDIS”
2008 Annual Fall Meeting of the APS Division of Nuclear Physics (DNP 2008), Oakland, CA, October 23–26, 2008.
141. “Low mass lepton pair production at large transverse momentum”
2008 Annual Fall Meeting of the APS Division of Nuclear Physics (DNP 2008), Oakland, CA, October 23–26, 2008.
142. “Tri-gluon correlation and transverse spin asymmetry in open charm production”
The 18th International Symposium on Spin Physics (SPIN 2008), Charlottesville, VA, October 6–11, 2008.
143. “QCD resummation for heavy quarkonium production in high energy collisions”
PHENO 2008 Symposium: LHC turn on, Madison, WI, April 28–30, 2008.
144. “Transverse momentum broadening of vector bosons in nuclear collisions”
2007 Annual Fall Meeting of the APS Division of Nuclear Physics (DNP 2007), Newport News, VA, October 10–13, 2007.
145. “Rescattering effects in high energy nuclear collisions”
Nuclear Physics Seminar, Institute of Particle Physics, Central China Normal University, Wuhan, China, November 27, 2006.
146. “Nuclear modification to parton evolution and onset of parton saturation”
Parallel talk, The 19th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (Quark Matter 2006), Shanghai, China, November 14–20, 2006.
147. “Universal nuclear dependence in parton distributions”
Midwest nuclear theory get-together, Argonne National Laboratory, Argonne, IL, October 14, 2006.