

Felix Maximilian Ringer

Curriculum Vitae

Employment

- Aug 2024 - present **Assistant Professor**, *Department of Physics and Astronomy, Stony Brook University, Stony Brook, NY, USA*
- June 2022 - Aug 2024 **Assistant Professor**, *Physics Department, Old Dominion University, Norfolk, VA, USA*, and **Staff Scientist**, *Jefferson Lab, Newport News, VA, USA*
- Sep 2021 - June 2022 **Simons Foundation Bridge Fellow**, *C.N. Yang Institute for Theoretical Physics (YITP), Stony Brook University, NY, USA*, funded by the Simons Foundation
- April 2020 – Aug 2021 **Project Scientist**, *Lawrence Berkeley National Laboratory, Berkeley, CA, USA*
- April 2017 – March 2020 **Postdoctoral Research Associate**, *University of California Berkeley/Lawrence Berkeley National Laboratory, Berkeley, CA, USA*
- July 2015 – March 2017 **Postdoctoral Research Associate**, *Los Alamos National Laboratory, Los Alamos, NM, USA*

Education

- Jan 2012– July 2015 **Ph.D. in physics**, *Institute for Theoretical Physics, University of Tübingen, Germany*
Thesis title: “Threshold Resummation and Higher Order Effects in Perturbative QCD”
Advisor: Prof. Werner Vogelsang
- Oct 2009– Dec 2011 **Completing Diploma in physics**, *University of Tübingen, Germany*
Thesis title: “Contributions of the Weak Gauge Bosons to Spin-Dependent Hard QCD Processes”
Advisor: Prof. Werner Vogelsang
- Oct 2008– Oct 2009 **Master of Advanced Study (MASt)/ Certificate of Advanced Studies in Mathematics (CASM)**, *University of Cambridge, UK*
St. John’s College, Cambridge, UK
- Oct 2005 **Start of Diploma (Bachelor & Master) in physics**, *University of Tübingen, Germany*
2005 **A-levels**, *Andreae High School, Herrenberg, Germany (Abitur)*

Personal Information

Place of birth Herrenberg, Germany
Citizenship Germany

Funding

- 2024 “Hybrid quantum computation using qubits and qumodes on QSCOUT”
Co-PI, QSCOUT User Project with Prof. Matt Grau, Sandia National Laboratory, NM, USA,
80 hours of runtime on a trapped-ion quantum testbed with pulse-level control.
- 2024 “Diffusion models for the Electron-Ion Collider”
PI, NESAP Pathfinding Project with Drs. Jack Araz, Nobuo Sato, NERSC, LBNL,
5000 GPU Perlmutter node hours.
- 2023 “Toward a microscopic picture of hadronization and multi-parton processes”
PI, Early Career Award from the Department of Energy, FY 2024-2028 (\$875,000).
- 2019 “Extracting quantum level laws by explainable machine learning and automated experiment design”
Co-PI, LDRD funding at LBNL with Drs. Yue-Shi Lai and Mateusz Ploskon, FY 2020/21
(\$279,000).

Awards and Service

- 2021-present EIC User Group Theory Working Group Convener.
- 2022-present Advisory Board member of the EIC Theory Institute at Brookhaven National Lab, NY, USA.
- 2024-present Member of IBM & CERN’s HEP Working Group.
- 2025 Organizer of the INT workshop “Bridging theory and experiment at the Electron-Ion Collider”,
INT, Seattle, WA, USA.
- 2025 Organizer of the CFNS workshop “Probing the frontiers of nuclear physics with AI at the EIC”,
Stony Brook University, NY, USA.
- 2024 Organizer of the “AI and Quantum computing journal club” at Jefferson Lab, VA, USA.
- 2024 Convener of the “Quark Confinement and the Hadron Spectrum” conference, Cairns, Australia.
- 2024 Distinguished Early Career Research Award, College of Science, ODU, USA.
- 2023 Organizer of the workshop “Probing the frontiers of nuclear physics with AI at the EIC”, CFNS,
Stony Brook University, NY, USA.
- 2023 Organizer of the INT workshop “Probing QCD at High Energy and Density with Jets”, UW,
Seattle, USA.
- 2023 Early Career Award from the US Department of Energy.
- 2023 Advisor of two REU & JSA students ODU/JLab, VA, USA.

- 2023 Organizer of the “Quantum computing bootcamp”, Jefferson Lab, VA, USA.
- 2022 Co-author of the EIC User Group Theory Working Group wiki page and oOrganizerrganizer of meetings on the “Polarized Bethe Heitler process” and “QED radiative corrections at the EIC” etc.
- 2022 Organizer of the “MC4EIC” workshop, Fermilab, USA.
- 2022, 2024 Mentor of undergraduate and high school students within the REYES (Remote Experience for Young Engineers and Scientists) program, ODU/UCB, USA.
- 2022 Lectures within the REYES program on “Nuclear physics & machine learning”, Old Dominion University, VA, USA.
- 2022 Lecturer at the HUGS summer program, Jefferson Lab and Hampton University, VA, USA.
- 2022 Organizer of the CFNS workshop “HERA-4-EIC” at Stony Brook University, NY, USA.
- 2021 Organizer of the 5-week Institute of Nuclear Theory (INT) program “Probing QCD at High Energy and Density with Jets” at the INT, University of Washington, Seattle, WA, USA.
- 2021 Lecturer at the Cracow School of Theoretical Physics, Poland.
- 2020, 21 Organizer of the workshop series “Jets for 3D imaging at the EIC” at UC Riverside, CA, CFNS; Stony Brook University, NY, USA.
- 2020 Interview for a popular science article in the Symmetry Magazine on “Simulating subatomic physics on a quantum computer”.
- 2020 Bernhard Heß Award for “Pioneering work on jet physics at the EIC” from the University of Regensburg, Germany.
- 2019 Organizer of the “9th International Conference on Physics Opportunities at an Electron-Ion Collider” and the “TMD Collaboration meeting” at LBL, Berkeley, CA, USA.
- 2018 Organizer of the workshop “Probing Quark-Gluon Matter with Jets” at BNL, NY, USA.
- 2018 Lecturer at the Huada 2018 QCD school at CCNU, Wuhan, Hubei, China.
- 2017-2019 Nuclear theory seminar organizer at Lawrence Berkeley National Laboratory.
- 2017 Organizer of the “Santa Fe Jets and Heavy Flavor Workshop 2017” in Santa Fe, NM, USA.
- 2016 Young Scientist Award at the SPIN ‘16 conference.
- 2016-2017 Nuclear theory seminar organizer at Los Alamos National Laboratory.
- 2016 “Outstanding Ph.D. thesis” award from the University of Tübingen, Germany.
- 2015 Ph.D. thesis awarded with “summa cum laude”.
- 2008 Scholarship from the DAAD (German Academic Exchange Service).

Reviewer for journals:

Physical Review Letters
 Physical Review D
 Journal of High Energy Physics

Stony Brook University – Stony Brook, NY 11794, USA – January 10, 2025

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Physics Letters B
Nuclear Physics A
SciPost
European Physical Journal A, C
International Journal of Modern Physics A
MDPI Universe

Reviewer/panelist for funding agencies:

US Department of Energy (DOE)
National Science Foundation (NSF)
Swiss National Science Foundation (SNSF)
Jefferson Lab Program Advisory Committee (PAC)
Jefferson Lab's Center for Nuclear Femtography (CNF)
Jefferson Lab's Laboratory Directed Research and Development (LDRD)

Supervision of Postdoctoral Associates

- Dr. Jack Araz, ODU/JLab and Stony Brook U. (Fall 2023 - Spring 2025)

Supervision of graduate students

- Gloria Tejedor Garcia, PhD student, Stony Brook U. (Fall 2023 - present).
- Jake Montgomery, PhD student, Stony Brook U. (Fall 2022 - present).
- Richard Whitehill, PhD student, ODU, advised with Nobuo Sato (Fall 2023 - present).
- Ben Russ, Master student, ODU (Summer 2022 - Summer 2023).

Supervision of undergraduate students

- Theodore Skelton, undergraduate student, ODU (Fall 2023 - Spring 2024).
- Alexis NieMiera, REU, JSA & SULI student, advised with Nobuo Sato, University of North Texas (Summer 2023 - summer 2024)
- Thomas McEntire, REU & JSA student, advised with Matt Grau, University of Buffalo (Summer 2023 - present).
- Gabriel Barrios, undergraduate student, ODU (Fall 2022 - Fall 2023).
- Siddanth Bhowmick, undergraduate student, Manipal Academy of Higher Education, India (Fall 2022 - present).
- Peter Devlin, Post-Bachelor student, advised with Nobuo Sato, JLab (Fall 2022 - Fall 2023)
- Fozī Alkaifi, undergraduate student, data analytics, ODU (Fall 2022 - summer 2023)

Publication record

- 59 published papers (inspire)
- h-index 34, >3600 citations (inspire)
- 26 publications with 50+ citations (inspire), 5 publications in Phys. Rev. Lett.

Memberships

- Quark-Gluon Tomography (QGT) Collaboration, DOE Topical Collaboration, Member
- IBM/CERN/DESY High-Energy Physics Working Group, Member
- American Physical Society, Member
- Electron-Ion Collider User Group, Member
- Lawrence Berkeley National Laboratory, Affiliate
- Thomas Jefferson National Accelerator Facility, User
- Brookhaven National Laboratory, Guest appointment

Publications

- [1] *"Point cloud-based diffusion models for the Electron-Ion Collider"*,
Jack Araz, Vinicius Mikuni, Felix Ringer, Nobuo Sato, Fernando Torales Acosta, Richard Whitehill
Submitted to Phys. Lett. B, arXiv:2410.22421.
- [2] *"Quantum computation of $SU(2)$ lattice gauge theory with continuous variables"*,
Victor Ale, Nora Bauer, Raghav Jha, Felix Ringer, George Siopsis
Submitted JHEP, arXiv:2410.14580.
- [3] *"Toward hybrid quantum simulations with qubits and qumodes on trapped-ion platforms"*,
Jack Araz, Jake Montgomery, Matt Grau, Felix Ringer,
Submitted to Phys. Rev. A, arXiv:2410.07346.
- [4] *"Factorization for jet production in heavy-ion collisions"*,
Yacine Mehtar-Tani, Felix Ringer, Balbeer Singh, Varun Vaidya,
Submitted to Phys. Rev. Lett., arXiv:2409.05957.
- [5] *"State preparation of lattice field theories using quantum optimal control"*,
Jack Araz, Siddhant Bhowmick, Matt Grau, Thomas McEntire, Felix Ringer,
Submitted to Phys. Rev. D, arXiv:2407.17556.
- [6] *"Thermal state preparation of the SYK model using a variational quantum algorithm"*,

Jack Araz, Raghav Jha, Felix Ringer, Bharath Sambasivam,
Submitted to Phys. Rev. D, arXiv:2406.15545.

- [7] *“Diffusion model approach to simulating electron-proton scattering events”*,
Peter Devlin, Jian-Wei Qiu, Felix Ringer, Nobuo Sato,
Phys. Rev. D **110** 1, 016030, arXiv:2310.16308.
- [8] *“Continuous variable quantum computation of the $O(3)$ model in 1+1 dimensions”*,
Raghav Jha, Felix Ringer, George Siopsis, Shane Thompson,
Phys. Rev. A **109** (2024) 5, 052412, arXiv:2310.12512.
- [9] *“Accelerating Markov Chain Monte Carlo sampling with diffusion models”*,
Nicholas Hunt-Smith, Wally Melnitchouk, Felix Ringer, Nobuo Sato, Anthony Thomas,
Martin White,
Comput. Phys. Commun. **296** 109059 (2024), arXiv:2309.01454.
- [10] *“Toward quantum computations of the $O(3)$ model using qumodes”*,
Raghav Jha, Felix Ringer, George Siopsis, Shane Thompson,
PoS LATTICE2023 (2024) 230, arXiv:2308.06946.
- [11] *“Liouvillian Dynamics of the Open Schwinger Model: String Breaking and Kinetic Dissipation in a Thermal Medium”*,
Kyle Lee, James Mulligan, Felix Ringer, Xiaojun Yao,
Phys. Rev. D **108** 9, 094518 (2023), arXiv:2308.03878.
- [12] *“A formalism for extracting track functions from jet measurements”*,
Kyle Lee, Ian Mout, Felix Ringer, Wouter Waalewijn
JHEP **01** (2024) 194, arXiv:2308.00028.
- [13] *“Is infrared-collinear safe information all you need for jet classification?”*,
Dimitrios Athanasakos, Andrew Larkoski, James Mulligan, Mateusz Ploskon, Felix Ringer,
JHEP **07** (2024) 257, arXiv:2305.08979.
- [14] *“Neutrino-tagged jets at the Electron-Ion Collider”*,
Miguel Arratia, Zhong-Bo Kang, Sebouh Paul, Alexei Prokudin, Felix Ringer, Fanyi Zhao,
Phys. Rev. D., **107**, 094036 (2023), arXiv:2212.02432.
- [15] *“Machine learning-based jet and event classification at the Electron-Ion Collider with applications to hadron structure and spin physics”*,
Kyle Lee, James Mulligan, Mateusz Ploskon, Felix Ringer, Feng Yuan,
JHEP **03** (2023) 085, arXiv:2210.06450.
- [16] *“Science requirements and detector concepts for the Electron-Ion Collider”*,
Nucl. Phys. A 1026 (2022) 122447, arXiv:2103.05419 (EIC Yellow Report).
- [17] *“The information content of jet quenching and machine learning assisted observable design”*,

- Yue Shi Lai, James Mulligan, Mateusz Ploskon, Felix Ringer,
JHEP **10** (2022) 011, arXiv:2111.14589.
- [18] “*Quantum simulation of non-equilibrium dynamics and thermalization in the Schwinger model*”,
Wibe de Jong, Kyle Lee, James Mulligan, Mateusz Ploskon, Felix Ringer, Xiaojun Yao,
Phys. Rev. D, **106**, 054508 (2022), arXiv:2106.08394.
- [19] “*The soft drop momentum sharing fraction z_g beyond leading-logarithmic accuracy*”,
Pedro Cal, Kyle Lee, Felix Ringer, Wouter Waalewijn,
Phys. Lett. B **833**, 137390 (2022), arXiv:2106.04589.
- [20] “*Leading jets and energy loss*”,
Duff Neill, Felix Ringer, Nobuo Sato,
JHEP **07** (2021) 041, arXiv:2103.16573.
- [21] “*Explainable machine learning of the underlying physics of high-energy particle collisions*”,
Yue Shi Lai, Duff Neill, Mateusz Ploskon, Felix Ringer,
Phys. Lett. B **829**, 137055 (2022), arXiv:2012.06582.
- [22] “*Quantum simulation of open quantum systems in heavy-ion collisions*”,
Wibe de Jong, Mekena Metcalf, James Mulligan, Mateusz Ploskon, Felix Ringer, Xiaojun Yao,
Phys. Rev. D. Lett., **104**, L051501 (2021), arXiv:2010.03571.
- [23] “*Joint thrust and TMD resummation in electron-positron and electron-proton collisions*”,
Yiannis Makris, Felix Ringer, Wouter Waalewijn,
JHEP **2102**, 070 (2021), arXiv:2009.11871.
- [24] “*Factorization and its breaking in dijet single transverse spin asymmetries in pp collisions*”,
Xiaohui Liu, Felix Ringer, Werner Vogelsang, Feng Yuan,
Phys. Rev. D., **102**, 114012 (2020), arXiv:2008.03666.
- [25] “*Lepton-jet correlation at the Electron-Ion Collider*”,
Xiaohui Liu, Felix Ringer, Werner Vogelsang, Feng Yuan,
Phys. Rev. D., **102**, 094022 (2020), arXiv:2007.12866.
- [26] “*Jet energy drop*”,
Pedro Cal, Kyle Lee, Felix Ringer, Wouter Waalewijn,
JHEP **2011**, 012 (2020), arXiv:2007.12187.
- [27] “*Jet-based measurements of Sivers and Collins asymmetries at the EIC*”,
Miguel Arratia, Zhong-Bo Kang, Alexei Prokudin, Felix Ringer,
Phys. Rev. D., **102**, 074015 (2020), arXiv:2007.07281
- [28] “*Asymmetric jet clustering in deep-inelastic scattering*”,
Miguel Arratia, Yiannis Makris, Duff Neill, Felix Ringer, Nobuo Sato,
Phys. Rev. D., **104**, 034005 (2021), arXiv:2006.10751.

- [29] “*Soft fragmentation on the celestial sphere*”,
Duff Neill, Felix Ringer,
JHEP **2006**, 086 (2020), arXiv:2003.02275.
- [30] “*Jets as precision probes in electron-nucleus collisions at the Electron-Ion Collider*”,
Miguel Arratia, Youqi Song, Felix Ringer, Barbara Jacak,
Phys. Rev. C **101**, 065204 (2020), arXiv:1912.05931.
- [31] “*Calculating the angle between jet axes*”,
Pedro Cal, Duff Neill, Felix Ringer, Wouter Waalewijn,
JHEP **2004**, 211 (2020), arXiv:1911.06840.
- [32] “*Hadron-in-jet production at partonic threshold*”,
Tom Kaufmann, Xiaohui Liu, Asmita Mukherjee, Felix Ringer, Werner Vogelsang,
JHEP **2002**, 040 (2020), arXiv:1910.11746.
- [33] “*Jet angularities in photoproduction at the Electron-Ion Collider*”,
Elke-Caroline Aschenauer, Kyle Lee, Brian Page, Felix Ringer,
Phys. Rev. D **101**, 054028 (2020), arXiv:1910.11460.
- [34] “*The soft drop groomed jet radius at NLL*”,
Zhong-Bo Kang, Kyle Lee, Xiaohui Liu, Duff Neill, Felix Ringer,
JHEP **2002**, 054 (2020), arXiv:1908.01783.
- [35] “*Can we observe jet P_T -broadening in heavy-ion collisions at the LHC?*”,
Felix Ringer, Bo-Wen Xiao, Feng Yuan,
Phys. Lett. B **808**, 135634 (2020), arXiv:1907.12541
- [36] “*Factorization of jet cross sections in heavy-ion collisions*”,
Jian-Wei Qiu, Felix Ringer, Nobuo Sato, Pia Zurita,
Phys. Rev. Lett. **122**, 252301 (2019), arXiv:1903.01993.
- [37] “*The jet shape at NLL'*”,
Pedro Cal, Felix Ringer, Wouter Waalewijn,
JHEP **1905**, 143 (2019), arXiv:1901.06389.
- [38] “*Lepton-jet correlations in deep inelastic scattering at the Electron-Ion Collider*”,
Xiaohui Liu, Felix Ringer, Werner Vogelsang, Feng Yuan,
Phys. Rev. Lett. **122**, 192003 (2019), arXiv:1812.08077.
- [39] “*Threshold resummation at NNLL for single-particle production in hadronic collisions*”,
Patriz Hinderer, Felix Ringer, George Sterman, Werner Vogelsang,
Phys. Rev. D. **99**, 054019 (2019), arXiv:1812.00915.
- [40] “*Soft drop groomed jet angularities at the LHC*”,

- Zhong-Bo Kang, Kyle Lee, Xiaohui Liu, Felix Ringer,
Phys. Lett. B **793**, 41 (2019), arXiv:1811.06983.
- [41] *“The groomed and ungroomed jet mass distribution for inclusive jet production at the LHC”*,
Zhong-Bo Kang, Kyle Lee, Xiaohui Liu, Felix Ringer,
JHEP **1810**, 137 (2018), arXiv:1803.03645.
- [42] *“Phenomenology of single-inclusive jet production with jet radius and threshold resummation”*,
Xiaohui Liu, Sven-Olaf Moch, Felix Ringer,
Phys. Rev. D. **97**, 056026 (2018), arXiv:1801.07284.
- [43] *“Jet angularity measurements for single inclusive jet production”*,
Zhong-Bo Kang, Kyle Lee, Felix Ringer,
JHEP **1804**, 110 (2018), arXiv:1801.00790.
- [44] *“Threshold and jet radius joint resummation for single-inclusive jet production”*,
Xiaohui Liu, Sven-Olaf Moch, Felix Ringer,
Phys. Rev. Lett. **119**, 212001 (2017), arXiv:1708.04641.
- [45] *“Collins azimuthal asymmetries of hadron production inside jets”*,
Zhong-Bo Kang, Alexei Prokudin, Felix Ringer, Feng Yuan,
Phys. Lett. B. **774**, 635 (2017), arXiv:1707.00913.
- [46] *“Using hadron-in-jet data in a global analysis of D^* fragmentation functions”*,
Daniele P. Anderle, Tom Kaufmann, Felix Ringer, Marco Stratmann, Ivan Vitev,
Phys. Rev. D. **96**, 034028 (2017), arXiv:1706.09857.
- [47] *“The transverse momentum distribution of hadrons within jets”*,
Zhong-Bo Kang, Xiaohui Liu, Felix Ringer, Hongxi Xing,
JHEP **1711**, 068 (2017), arXiv:1705.08443.
- [48] *“The energy distribution of subjets and the jet shape”*,
Zhong-Bo Kang, Felix Ringer, Wouter Waalewijn,
JHEP **1707**, 064 (2017), arXiv:1705.05375.
- [49] *“ J/ψ production and polarization within a jet”*,
Zhong-Bo Kang, Jian-Wei Qiu, Felix Ringer, Hongxi Xing, Hong Zhang,
Phys. Rev. Lett. **119**, 032001 (2017), arXiv:1702.03287.
- [50] *“Inclusive production of small radius jets in heavy-ion collisions”*,
Zhong-Bo Kang, Felix Ringer, Ivan Vitev,
Phys. Lett. B. **769**, 242 (2017), arXiv:1701.05839.
- [51] *“Fragmentation functions beyond fixed order accuracy”*,
Daniele P. Anderle, Tom Kaufmann, Felix Ringer, Marco Stratmann,
Phys. Rev. D. **95**, 054003 (2017), arXiv:1611.03371.

- [52] *“Effective field theory approach to open heavy flavor production in heavy-ion collisions”*,
Zhong-Bo Kang, Felix Ringer, Ivan Vitev
JHEP **1703**, 146 (2017), arXiv:1610.02043.
- [53] *“Jet substructure using semi-inclusive jet functions within SCET”*,
Zhong-Bo Kang, Felix Ringer, Ivan Vitev,
JHEP **1611**, 155 (2016), arXiv:1606.07063.
- [54] *“The semi-inclusive jet function in SCET and small radius resummation for inclusive jet production”*,
Zhong-Bo Kang, Felix Ringer, Ivan Vitev,
JHEP **1610**, 125 (2016), arXiv:1606.06732.
- [55] *“Jet fragmentation functions in proton-proton collisions using soft-collinear effective theory”*,
Yang-Ting Chien, Zhong-Bo Kang, Felix Ringer, Ivan Vitev, Hongxi Xing,
JHEP **1605**, 125 (2016), arXiv:1512.06851.
- [56] *“Initial-state splitting kernels in cold nuclear matter”*,
Grigory Ovanessian, Felix Ringer, Ivan Vitev,
Phys. Lett. B **760**, 706 (2016), arXiv:1512.00006.
- [57] *“Fragmentation functions at next-to-next-to-leading order accuracy”*,
Daniele P. Anderle, Felix Ringer, Marco Stratmann,
Phys. Rev. D. **92**, 114017 (2015), arXiv:1510.05845.
- [58] *“Single-spin asymmetries in W boson production at next-to-leading order”*,
Felix Ringer, Werner Vogelsang,
Phys. Rev. D. **91**, 094033 (2015), arXiv:1503.07052.
- [59] *“Interplay of threshold resummation and hadron mass corrections in deep inelastic processes”*,
Alberto Accardi, Daniele P. Anderle, Felix Ringer,
Phys. Rev. D. **91**, 034008 (2015), arXiv:1411.3649.
- [60] *“Toward NNLL threshold resummation for hadron pair production in hadronic collisions”*,
Patriz Hinderer, Felix Ringer, George F. Sterman, Werner Vogelsang,
Phys. Rev. D. **91**, 014016 (2015), arXiv:1411.3149.
- [61] *“Approximate next-to-next-to-leading order corrections to hadronic jet production”*,
Daniel de Florian, Patriz Hinderer, Asmita Mukherjee, Felix Ringer, Werner Vogelsang,
Phys. Rev. Lett. **112**, 082001 (2014), arXiv:1310.7192.
- [62] *“Threshold resummation for polarized (semi-)inclusive deep inelastic scattering”*,
Daniele P. Anderle, Felix Ringer, Werner Vogelsang,
Phys. Rev. D **87**, 094021 (2013), arXiv:1304.1373.

- [63] “QCD resummation for semi-inclusive hadron production processes”,
Daniele P. Anderle, Felix Ringer, Werner Vogelsang,
Phys. Rev. D **87**, 034014 (2013), arXiv:1212.2099.

Other papers

- [1] “Precision Studies of QCD in the Low Energy Domain of the EIC”,
V. Burkert et al.
EIC second detector white paper, arXiv:2211.15746 (2022).
- [2] “Snowmass 2021 white paper: Electron Ion Collider for High Energy Physics”,
R. Khalek et al.
Snowmass 2022 summer study, arXiv:2203.13199 (2022).
- [3] “Snowmass 2021 white paper: resummation for future colliders”,
M. van Beekveld et al.
Snowmass 2022 summer study, arXiv:2203.07907 (2022).
- “Electroweak structure functions at the EIC” in collaboration with Abhay Deshpande, Krishna Kumar, Seamus Riordan, Swadhin Taneja, Werner Vogelsang appeared in
- [4] “Gluons and the quark sea at high energies: Distributions, polarization and tomography”,
D. Boer et al.,
arXiv:1108.1713, pp. 61-74, (2011).
- [5] “Fundamental Physics at the Intensity Frontier”,
J. L. Hewett et al.,
arXiv:1205.2671 (2012).

Conference Proceedings

- [64] “Point cloud diffusion models for the Electron-Ion Collider”,
Jack Araz, Vinicius Mikuni, Felix Ringer, Nobuo Sato, Fernando Torales Acosta, Richard Whitehill
NeurIPS 2024 Proceedings.
- [1] “Calculating the energy loss of leading jets”,
Duff Neill, Felix Ringer, Nobuo Sato,
Hard Probes 2020, arXiv:2008.09532 (2020).
- [2] “Les Houches 2019: Physics at TeV Colliders: Standard Model Working Group Report”,
S. Amoroso et al.,
Les Houches 2019, arXiv:2003.01700 (2020).

- [3] “QCD factorization and universality of jet cross sections in heavy-ion collisions”, Jian-Wei Qiu, Felix Ringer, Nobuo Sato, Pia Zurita, Quark Matter 2019, Nucl. Phys. A, arXiv:2002.01652.
- [4] “Jet substructure and a possible determination of the QCD coupling”, Felix Ringer, PoS ALPHAS2019 (2019), ECT*, Trento, Italy, arXiv:1907.01435.
- [5] “Jet substructure in high-energy hadron collisions”, Felix Ringer, PoS HardProbes2018 010 (2018), arXiv:1812.07547.
- [6] “Threshold and jet radius joint resummation for single-inclusive jet production”, Engin Eren, Katerina Lipka, Xiaohui Liu, Sven-Olaf Moch, Felix Ringer, PoS LL2018 002 (2018), arXiv:1808.04574.
- [7] “Fragmentation functions at NNLO and their small- z logarithmic corrections”, Daniele P. Anderle, Tom Kaufmann, Felix Ringer, Marco Stratmann, Parton radiation and fragmentation from LHC to FCC-ee.
- [8] “Jet and heavy flavor production in heavy-ion collisions”, Zhong-Bo Kang, Felix Ringer, Ivan Vitev, Hard Probes 2016, arXiv:1612.06511.
- [9] “Semi-inclusive jet cross sections within SCET”, Zhong-Bo Kang, Felix Ringer, Ivan Vitev, QCD Evolution 2016, arXiv:1609.07112.
- [10] “Heavy flavor production in heavy-ion collisions from soft collinear effective theory”, Zhong-Bo Kang, Felix Ringer, Ivan Vitev, Strangeness in Quark Matter 2016, arXiv:1609.04908.
- [11] “Fragmentation Functions beyond Next-To-Leading Order”, Daniele P. Anderle, Tom Kaufmann, Felix Ringer, Marco Stratmann, PoS DIS2016 063 (2016).
- [12] “Toward NNLL Resummation for Hadron Production in Hadronic Collisions”, Patriz Hinderer, Felix Ringer, George F. Sterman, Werner Vogelsang, PoS QCDEV2015 015 (2015), arXiv:1510.08037.
- [13] “QCD resummation in hadron production”, Daniele P. Anderle, Felix Ringer, Werner Vogelsang, Nuovo Cim. C **036**, 153-157 (2013), arXiv:1307.0701.

Talks and Seminars

- Dec 2024 *Quantum computing for nuclear and particle physics*, invited talk at the “Annual Theory Meeting”, Durham University, UK.
- Nov 2024 *Toward quantum simulations for nuclear physics with qubits and qumodes*, seminar talk at Stony Brook University, NY, USA.
- Nov 2024 *Toward quantum simulations for fundamental physics with qubits and qumodes*, invited talk at IBM’s Quantum Computing for HEP Working Group.
- Sep 2024 *Jets and their substructure at the EIC*, invited talk at the workshop “Precision QCD predictions for ep physics at the EIC (III): opportunities with a second IR” at CFNS, Stony Brook University, NY, USA.
- July 2024 *Toward quantum simulations for nuclear physics with qubits and qumodes*, seminar talk at LANL, Los Alamos, NM, USA.
- June 2024 *Diffusion models for the Electron-Ion Collider*, invited talk at the INT program “QCD at the Femtoscale in the Era of Big Data”, University of Washington, Seattle, USA.
- June 2024 *Jet physics at the EIC*, invited talk at the RHIC/AGS User’s Meeting, BNL, Upton, NY, USA.
- May 2024 *Toward quantum simulations for nuclear physics with qubits and qumodes*, seminar talk at MIT, Boston, MA, USA.
- Feb 2024 *EIC Diffusion*, talk given at the NESAP Pathfinding kickoff meeting, NERSC, LBNL, Berkeley, CA, USA.
- Feb 2024 *Toward a microscopic picture of QCD dynamics*, seminar talk at Stony Brook University, Stony Brook, NY, USA.
- Feb 2024 *Jet physics and machine learning at the EIC*, invited talk at the “International school and workshop on probing hadron structure at the Electron-Ion Collider”, ICTS, Bangalore, India.
- Jan 2024 *Probing the Frontiers of Nuclear Physics with AI at the EIC - Workshop summary*, seminar talk at the Jefferson Lab EIC Meeting, Newport News, VA, USA.
- Nov 2023 *Toward quantum simulations for high-energy nuclear physics*, seminar talk at Argonne National Laboratory, Chicago, IL, USA.
- Oct 2023 *Machine learning-based methods in quantum chromodynamics*, invited plenary talk at the EINN 2023 conference, Paphos, Cyprus.
- Sep 2023 *Non-equilibrium dynamics and string breaking in the Schwinger model*, invited talk at the workshop “Bridging the gap: Thermalization, from Cold Atoms to Hot Quantum Chromodynamics” at IQUS, University of Washington, Seattle, WA, USA.
- Sep 2023 *Toward quantum simulations of elementary particle physics*, colloquium at the University of the Basque Country, Bilbao, Spain.
- July 2023 *Machine learning and jet physics at the EIC*, invited talk at the EIC User Group Meeting 2023, University of Warsaw, Poland.

- July 2023 *Non-equilibrium dynamics and string breaking in the Schwinger model*,
seminar talk at BNL, Brookhaven, NY, USA.
- June 2023 *Recent progress in quantum computing at JLab*,
invited talk at the Jefferson Lab Users Organization meeting, Newport News, VA, USA.
- May 2023 *Nature of jets at the EIC*,
invited talk at the “1st International Workshop on a 2nd Detector for the EIC”, Temple University, PA, USA.
- May 2023 *Non-equilibrium dynamics and string breaking in the Schwinger model*,
seminar talk the University of Maryland, MD, USA.
- March 2023 *Machine learning-based jet and event classification at the Electron-Ion Collider with applications to hadron structure and spin physics*,
talk the DIS2023 conference, Michigan State University, East Lansing, MI, USA.
- Oct 2022 *Jet observables in ep/eA collisions at the TeV scale*,
invited talk at the “LHeC/FCCeh and PERLE” workshop, Orsay, Paris, France.
- July 2022 *Inclusive jets and their substructure at sPHENIX*,
invited talk at the “Predictions for sPHENIX” workshop, BNL, NY, USA.
- June 2022 *Leading jet cross sections and comparison to experimental data*,
invited talk at the “Jet Physics: From RHIC/LHC to EIC” CFNS workshop, Stony Brook University, NY, USA.
- May 2022 *Measuring spin asymmetries with jet correlations and substructure*,
invited talk at the Transversity conference, University of Pavia, Italy.
- May 2022 *Recent jet substructure calculations and comparison to LHC data*,
invited talk at the LoopFest XX conference, University of Pittsburgh, PA, USA.
- April 2022 *Quantum simulations of the Schwinger model*,
QIS guest lecture at Stony Brook University, NY, USA.
- April 2022 *Probing the frontiers of QCD*,
seminar talk at the Max Planck Institute for Physics, Munich, Germany.
- April 2022 *Interpretable machine learning for high-energy nuclear physics*,
invited talk at the INT program “Machine Learning for Nuclear Theory”, University of Washington, WA, USA.
- March 2022 *Probing the frontiers of QCD*,
colloquium at Old Dominion University and Jefferson Lab, Norfolk, VA, USA.
- Feb 2022 *Probing the frontiers of QCD*,
seminar at UC Berkeley/LBNL, Berkeley, CA, USA.
- Feb 2022 *Probing the frontiers of QCD*,
colloquium at the University of Houston, Houston, TX, USA.
- Feb 2022 *Novel probes of the Standard Model with jets*,
seminar at Argonne National Laboratory, Chicago, IL, USA.
- Feb 2022 *Probing the frontiers of QCD*,

- seminar at the University of Michigan, Ann Arbor, MI, USA.
- Jan 2022 *Jet quenching and quantum algorithms*,
invited talk at the workshop “The Quantumness of Hard Probes”, MITP, Mainz, Germany.
- Dec 2021 *Quantum simulations of field theories as open quantum systems*,
QC-HEP seminar at LBNL/UC Berkeley, Berkeley, CA, USA.
- Oct 2021 *Progress on fragmentation function studies*,
plenary talk given at “The 24th International Spin Symposium, SPIN 2021”.
- Oct 2021 *Quantum simulations of the Schwinger model*,
seminar given at the YITP, Stony Brook University, Stony Brook, NY, USA.
- Aug 2021 *The future of BOOST-related physics*,
invited participation in the panel discussion at the workshop “BOOST 2021”.
- Aug 2021 *Machine learning and quantum computing applied to particle physics*,
plenary talk at the conference “A Virtual Tribute to the Quark Confinement and the Hadron Spectrum 2021”.
- July 2021 *White box AI for parton shower development*,
talk given at the workshop “ML4Jets 2021”, University of Heidelberg, Heidelberg, Germany.
- June 2021 *Quantum simulation of non-equilibrium dynamics and thermalization in the Schwinger model*,
seminar given at LBL & UCLA, Berkeley, CA, USA.
- June 2021 *Leading jets and energy loss*,
seminar given at IGFAE, University of Santiago de Compostela, Spain.
- May 2021 *Leading jets and energy loss*,
seminar given at LBL, Berkeley, CA, USA.
- May 2021 *Leading jets and energy loss*,
talk given at the QCD evolution workshop at UCLA, Los Angeles, CA, USA.
- April 2021 *Simulating real-time dynamics of hard probes in nuclear matter on a quantum computer*,
talk given at the APS April meeting, USA.
- April 2021 *Probing the frontiers of QCD*,
seminar given at Stony Brook University, NY, USA.
- March 2021 *SIDIS, jets and TMDs*,
working group report with Dr. Ralf Seidl (RIKEN) at the “IR2@EIC: Science and Instrumentation of the 2nd IR for the EIC” workshop organized by Argonne and CFNS, USA.
- March 2021 *GANs for parton shower development*,
invited talk given at the “Berkeley Deep Generative Models for Fundamental Physics Meeting” at the Berkeley Institute for Data Science, UC Berkeley, CA, USA.
- Jan 2021 *EIC jet physics*,
invited talk given at the workshop “EIC opportunities for Snowmass” at CFNS Stony Brook University, Stony Brook, NY, USA.
- Jan 2021 *Quantum simulation of open quantum systems in heavy-ion collisions*,
seminar given at JLab in Newport News, VA, USA.

- Dec 2020 *Quantum simulation of open quantum systems in heavy-ion collisions*,
seminar given at the University of Stavanger, Stavanger, Norway.
- Nov 2020 *Do we need jets at the EIC?*,
seminar at LBL, Berkeley, CA, USA.
- Oct 2020 *Probing the frontiers of QCD*,
seminar at the Technical University of Munich, Munich, Germany.
- Oct 2020 *Parton showers and machine learning*,
seminar given at LBL, Berkeley, CA, USA.
- Oct 2020 *Jet measurements at the EIC*,
invited talk given at the Annual RHIC & AGS Users' Meeting, BNL, NY, USA.
- Oct 2020 *Quantum simulation of open quantum systems in heavy-ion collisions*,
seminar given at LBL, Berkeley, CA, USA.
- Oct 2020 *Aspects of jet physics in heavy-ion collisions*,
seminar given at the University of Tennessee, Knoxville, TN, USA.
- Oct 2020 *Probing the frontiers of QCD*,
seminar given at the University of Münster, Münster, Germany.
- Aug 2020 *Probing the frontiers of QCD*,
seminar given at Argonne National Laboratory, Lemont, IL, USA.
- July 2020 *Jet physics at the Electron-Ion Collider*,
invited opening talk given at the workshop "Jet Observables at the Electron-Ion Collider", BNL, NY, USA.
- July 2020 *Jet physics in Relativistic Heavy-Ion Collisions and EIC*,
invited talk given at the Snowmass Energy Frontier preparatory session.
- June 2020 *The dynamics of leading jets and the jet energy loss*,
seminar given at CFNS Stony Brook University, Stony Brook, NY, USA.
- June 2020 *The dynamics of leading jets and the jet energy loss*,
talk given at the conference "Hard Probes 2020", University of Austin, Austin, TX, USA.
- May 2020 *Probing the frontiers of QCD*,
seminar given at Argonne National Laboratory, Lemont, IL, USA.
- March 2020 *TMD measurements with jets*,
invited overview talk given at the "1st EIC Yellow Report Workshop" at Temple University, Philadelphia, PA, USA.
- March 2020 *Probing the frontiers of QCD with jets*,
colloquium given at Georgia State University, GA, USA.
- Feb 2020 *Probing the frontiers of QCD with jets*,
seminar given at Temple University, Philadelphia, PA, USA.
- Feb 2020 *Probing the frontiers of QCD with jets*,
seminar given at UC Riverside, Riverside, CA, USA.
- Jan 2020 *Jets and fragmentation at the EIC*,

- invited talk given at the workshop “QCD with Electron-Ion Collider (QEIC)”, IIT Bombay, Mumbai, India.
- Nov 2019 *QCD factorization and universality of jet cross sections in heavy-ion collisions*, talk given at Quark Matter 2019, Central China Normal University, Wuhan, Hubei, China.
- Oct 2019 *Soft drop groomed jet substructure observables*, seminar given at the University of Amsterdam, Nikhef, Amsterdam, Netherlands.
- July 2019 *Higher order corrections for jet physics at the LHC*, invited overview talk given at the “2019 Meeting of the Division of Particles & Fields of the APS” at Northeastern University in Boston, MA, USA.
- July 2019 *QCD factorization of jet observables in heavy-ion collisions*, seminar given at BNL, Brookhaven, NY, USA.
- June 2019 *All-order calculations and their application to jet physics*, invited review talk given at the “Les Houches workshop - Physics at TeV Colliders 2019” in Les Houches, France.
- May 2019 *Jet physics and substructure with heavy-flavor in heavy-ion collisions*, invited overview talk given at the “Jet Tools - Heavy Ion Jet Substructure 2019” workshop at the University of Bergen in Bergen, Norway.
- March 2019 *QCD factorization of jet cross sections in heavy-ion collisions*, invited talk given at the “SCET 2019” workshop at UCSD in San Diego, CA, USA.
- March 2019 *QCD factorization of jet cross sections in heavy-ion collisions*, seminar given at JLab in Newport News, VA, USA.
- March 2019 *Fragmentation in jets*, invited talk given at the “Workshop on Novel Probes of the Nucleon Structure in SIDIS, e^+e^- and pp ” at Duke University in Durham, NC, USA.
- March 2019 *Aspects of jet physics at the EIC*, invited talk given at the “UC EIC Consortium kickoff meeting” at LBL in Berkeley, CA, USA.
- Feb 2019 *Jet substructure and a possible determination of the QCD coupling*, invited talk given at “alphas-2019: Workshop on precision measurements of the QCD coupling constant” at ECT* in Trento, Italy.
- Jan 2019 *QCD factorization of jet cross sections in heavy-ion collisions*, invited talk given at the “UCLA Santa Fe Jets and Heavy Flavor Workshop” at UCLA in Los Angeles, CA, USA.
- Dec 2018 *The latest developments for jets as tools for precision physics*, invited talk given at the “US ATLAS Hadronic Final State Forum” at LBL in Berkeley, CA, USA.
- Dec 2018 *Jets and their substructure in heavy-ion collisions*, seminar given LBL in Berkeley, CA, USA.
- Nov 2018 *Jet substructure in high-energy hadron collisions*, seminar given at Wayne State University in Detroit, MI, USA.

- Oct 2018 *The fragmentation of hadrons in jets - theory*,
invited talk given at the “Fifth Joint Meeting of the Nuclear Physics Divisions of the APS and JPS” in Waikoloa, HI, USA.
- Oct 2018 *Theory review of jets at the EIC*,
invited talk given at the INT program “Probing Nucleons and Nuclei in High Energy Collisions” in Seattle, WA, USA.
- Oct 2018 *Jet substructure in high-energy hadron collisions*,
plenary talk given at the conference “Hard Probes 2018” in Aix-les-Bains, Savoie, France.
- Aug 2018 *Groomed jet substructure observables for inclusive jet production*,
invited talk given at the conference “QCD@LHC” at TU Dresden, Dresden, Germany.
- June 2018 *Jet substructure observables involving hadrons and subjets*,
invited talk given at the workshop “Opportunities and Challenges with Jets at LHC and beyond” at Central China Normal University, Wuhan, Hubei, China.
- May 2018 *Hadron in jet fragmentation*,
invited talk given at the conference “CIPANP18”, Palm Springs, CA, USA.
- May 2018 *TMD sensitive jet observables*,
invited talk given at the workshop “QCD evolution 2018”, Santa Fe, NM, USA.
- May 2018 *Joint resummation for semi-inclusive jet processes*,
seminar given at the University of Oregon, Eugene, OR, USA.
- April 2018 *New opportunities in jet physics*,
seminar given at the University of Regensburg, Regensburg, Germany.
- April 2018 *QCD jets in DIS*,
invited talk given at the conference “DIS2018” in Kobe, Japan.
- April 2018 *Threshold and jet radius resummation for single-inclusive jet production*,
invited talk given at the conference “DIS2018” in Kobe, Japan.
- March 2018 *Semi-inclusive jet substructure observables*,
seminar given at DESY, Hamburg, Germany.
- March 2018 *Jet mass distributions for inclusive jets at the LHC*,
talk given at the workshop “SCET18”, Nikhef, Amsterdam, Netherlands.
- March 2018 *New opportunities in jet physics*,
seminar given at the University of Amsterdam, Nikhef, Amsterdam, Netherlands.
- Feb 2018 *New opportunities in jet physics at colliders*,
seminar given at the University of Illinois at Urbana-Champaign, Urbana-Champaign, IL, USA.
- Jan 2018 *Heavy meson fragmentation functions in pp and heavy ion collisions*,
invited talk given at the “Santa Fe Jet and Heavy Flavor Workshop”, Santa Fe, NM, USA.
- Jan 2018 *Semi-inclusive jet cross sections within SCET*,
seminar given at BNL, Brookhaven, NY, USA.
- Nov 2017 *The transverse momentum distribution of hadrons inside jets*,

- invited talk given at the workshop "Resummation, Evolution, Factorization 2017" at Complutense University of Madrid, Madrid, Spain.
- Nov 2017 *Threshold and jet radius resummation for inclusive jet production*, invited talk given at the workshop "Advances in QCD and Applications to Hadron Colliders Workshop" at UCLA, Los Angeles, CA, USA.
- Oct 2017 *Resummation for (un)polarized hard-scattering processes*, talk given at the workshop "The Flavor Structure of the Nucleon Sea" at the INT, Seattle, WA, USA.
- Sep 2017 *The transverse momentum distribution of hadrons inside jets*, invited talk given at the workshop "Spatial and Momentum Tomography of Hadrons and Nuclei" at the INT, Seattle, WA, USA.
- Aug 2017 *Inclusive jet production at the LHC*, seminar given at LBL, Berkeley, CA, USA.
- Aug 2017 *Inclusive jet production and subjets*, invited talk given at the APS-DPF conference at Fermilab, Chicago, IL, USA.
- June 2017 *Inclusive jets and their substructure*, invited talk given at the workshop "loopfest 2017" at ANL, Chicago, IL, USA.
- May 2017 *The transverse momentum distribution of hadrons within jets*, invited talk given at the workshop "QCD Evolution 2017" at JLab, Newport News, VA, USA.
- May 2017 *Hadron distributions within jets*, invited talk given at the workshop "QCD Structure of Nucleons in the Modern Era" at UCLA, Los Angeles, CA, USA.
- March 2017 *Inclusive jets and their substructure*, seminar given at LANL, Los Alamos, NM, USA.
- March 2017 *Inclusive small- R jets and their substructure*, talk given at the workshop "SCET 2017" at Wayne State University, Detroit, MI, USA.
- March 2017 *Jet substructure and heavy flavor production at the LHC*, seminar given at UCLA, Los Angeles, CA, USA.
- Feb 2017 *Inclusive jets and their substructure within SCET*, invited talk given at the workshop "Topical Group On Hadronic Physics (GHP)" in Washington, D.C., USA.
- Jan 2017 *Inclusive jets and their substructure in pp and heavy-ion collisions*, invited talk given at the workshop "Jets @ LHC" at ICTS, Bangalore, India.
- Nov 2016 *The jet fragmentation function in pp and ep collisions*, invited talk given at the conference "Joint CTEQ Meeting and POETIC 7" at Temple University, Philadelphia, PA, USA.
- Oct 2016 *Semi-inclusive jet cross sections within SCET*, seminar given at LBL, Berkeley, CA, USA.
- Sep 2016 *Threshold Resummation for Longitudinally Polarized Processes*,

- invited talk given at the conference “SPIN ‘16” at University of Illinois at Urbana-Champaign, Urbana-Champaign, IL, USA.
- Sep 2016 *Jet and Heavy Flavor Production from Soft Collinear Effective Theory*,
talk given at the conference “Hard Probes 2016” at Central China Normal University, Wuhan, Hubei, China.
- June 2016 *Heavy Flavor Production from Soft Collinear Effective Theory*,
talk given at the conference “Strangeness in Quark Matter 2016” at UC Berkeley, Berkeley, CA, USA.
- May 2016 *Jet fragmentation functions in proton-proton collisions*,
invited talk given at the workshop “QCD Evolution 2016” at Nikhef, Amsterdam, Netherlands.
- April 2016 *Jet fragmentation functions in proton and heavy ion collisions*,
invited talk given at the workshop “High p_T Physics in the RHIC-LHC Era” at BNL, Brookhaven, NY, USA.
- March 2016 *The Jet fragmentation function and comparison to LHC data*,
talk given at the workshop “SCET 2016” at DESY, Hamburg, Germany.
- Jan 2016 *Jet fragmentation functions in pp collisions using SCET*,
invited talk given at the “Electron Ion Collider User Group Meeting 2016” at UC Berkeley, Berkeley, CA, USA.
- May 2015 *Toward NNLL resummation for single- and di-hadron production in hadronic collisions*,
talk given at the workshop “QCD evolution 2015” at JLab, Newport News, VA, USA.
- Jan 2015 *New Results on QCD Threshold Resummation*,
seminar given at JLab, Newport News, VA, USA.
- Jan 2015 *New Results on Threshold Resummation for QCD Hard Scattering*,
seminar given at LANL, Los Alamos, NM, USA.
- Jun 2014 *Approximate NNLO Corrections to Hadronic Jet Production*,
talk given at the workshop “Parton Showers, Event Generators and Resummation”, Münster, Germany.
- May 2014 *Mass Corrections in Electron-Positron Annihilation to Hadrons*,
seminar given at JLab, Newport News, VA, USA.
- Oct 2013 *Introduction to pQCD and Collider Physics*,
talk given at the “annual meeting of the Kepler graduate center Tübingen”, Heiligkreuztal, Germany.
- Aug 2013 *QCD Resummation for Semi-Inclusive Hadron Production Processes*,
talk given at the conference “QCD Landscape of the Nucleon and Atomic Nuclei”, LBL, Berkeley, CA, USA.
- Aug 2013 *QCD Resummation for Semi-Inclusive Hadron Production Processes*,
seminar given at BNL, Brookhaven, NY, USA.
- July 2013 *QCD Resummation for Semi-Inclusive Hadron Production Processes*,

invited talk given at the “2013 International Workshop on Hadron Structure and Spectroscopy”, Erlangen, Germany.

Oct 2012 *QCD Resummation in Hadron Production*,

talk given at the “3rd Workshop on the QCD structure of the Nucleon”, Bilbao, Spain.

Oct 2012 *Perturbative QCD and Resummation*,

talk given at the “annual meeting of the Kepler graduate center Tübingen”, Todtmoos, Germany.

Jun 2012 *Resummation and Hadronic W Production*,

seminar given at ECT*, Trento, Italy.

Teaching

Spring 2025 Thermal Physics and Statistical Mechanics, Physics 306, SBU

Spring 2024 Thermal Physics and Statistical Mechanics, Physics 454, ODU

Spring 2023 Thermal Physics and Statistical Mechanics, Physics 454, ODU

Fall 2022 Mathematical Methods for Physics with Recitations, Physics 355, ODU

Teaching Assistance

2014 Tutorial and preparation of exercises and exam for Classical Field Theory

2013 Tutorial for Quantum Field Theory II

2012/13 Tutorial for Quantum Field Theory I

2012 Tutorial for Electrodynamics

2011/12 Tutorial for Quantum Mechanics II

2011 Tutorial for Quantum Mechanics I

2010/11 Tutorial for Classical Mechanics

Committees

Undergraduate program committee, ODU (Fall 2023 - Summer 2024)

Graduate Recruitment and preview committee, ODU (Fall 2022 - Summer 2024)

Diederich and Osorhean scholarship committee, ODU (Fall 2022 - Summer 2024)

Graduate program committee, ODU (Fall 2022 - Summer 2023)

AI in teaching committee, ODU (Summer 2023)

Doctoral dissertation committee, Urban Kopal, ODU (Summer 2023 - present)

Doctoral dissertation committee, Aidan Clark, ODU (Summer 2023 - present)

Doctoral dissertation committee, Caleb Fogler, ODU (Summer 2023 - Summer 2024)

Doctoral dissertation committee, Jake Montgomery, SBU (Summer 2023 - present)

Doctoral dissertation committee, Will Jeffries, ODU (Fall 2022 - present)

Doctoral dissertation committee, Ben Russ, ODU (Fall 2022 - spring 2023)