Adith Ramamurti

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Contact Information

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U.S. Naval Research Laboratory
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Employment

Research Physicist — Nov. 2018 - PRESENT
Acoustics Division, U.S. Naval Research Laboratory,
Washington, DC

Education

Ph.D., Physics (Nuclear Theory) — Aug. 2013 - Nov. 2018
Stony Brook University, Stony Brook, NY
Advisor: Edward Shuryak
Dissertation: Recent progress in understanding the role of monopoles in QCD

A.B., Mathematical Physics; A.B., Music — Sep. 2009 - May 2013
Brown University, Providence, RI
Honors: *magna cum laude*
Advisor: Antal Jevicki
Senior Thesis: Quantization of symmetric spaces

Publications and Pre-prints

A. Ramamurti and E. Shuryak, *Extending the hydrodynamical description of heavy-ion collisions to the "outer edge" of the fireball*, arXiv:1811.03655 [hep-ph].

A. Ramamurti, E. Shuryak, and I. Zahed, *Are there monopoles in the quark-gluon plasma?*, Physical Review D **97**, 114028, arXiv:1802.10509 [hep-ph].

A. Ramamurti and E. Shuryak, *Chiral symmetry breaking and monopoles in gauge theories*, Physical Review D **100**, 016007, arXiv:1801.06922 [hep-ph].

A. Ramamurti and E. Shuryak, *Role of QCD monopoles in jet quenching*, Physical Review D **97**, 016010, arXiv:1708.04254 [hep-ph].

A. Ramamurti and E. Shuryak, *An effective model of QCD monopoles*, Nuclear Physics A **967**, 868-871, arXiv:1704.04467 [hep-ph].

A. Ramamurti and E. Shuryak, *Effective model of QCD magnetic monopoles from numerical study of one- and two-Component Coulomb quantum Bose gases*, Physical Review D **95**, 076019, arXiv:1702.07723 [hep-ph].

I. Iatrakis, A. Ramamurti and E. Shuryak, *Pomeron interactions from the Einstein-Hilbert action*, Physical Review D **94**, 045005, arXiv:1602.05014 [hep-ph].

I. Iatrakis, A. Ramamurti, and E. Shuryak, *Collective string interactions in AdS/QCD and high-multiplicity pA collisions*, Physical Review D **92**, 014011, arXiv:1503.04759 [hep-ph].

Talks and Conferences

Gauge Topology III: From Lattice to Colliders — May 2018

European Center for Theoretical Physics, Trento, IT
Recent progress in understanding the role of monopoles in QCD

JETSCAPE Winter School and Workshop — Jan. 2018
Lawrence Berkley National Lab, Berkeley, CA
The role of QCD monopoles in jet quenching

Stony Brook Nuclear Theory Seminar — Nov. 2017
Stony Brook University, Stony Brook, NY
The role of QCD monopoles in jet quenching

XXVIth International Conference on Ultrarelativistic — Feb. 2017
Nucleus-Nucleus Collisions (Quark Matter 2017)
Chicago, IL
An effective model of QCD monopoles

Gauge Field Topology Workshop — Aug. 2015
Simons Center for Geometry and Physics, Stony Brook, NY
QCD strings and their interactions from the holographic perspective

Honors and Awards

Jerome and Isabella Karle Fellowship — Nov. 2018 - Nov. 2020
U.S. Naval Research Laboratory, Washington, DC

Mildred G. Widgoff Prize for Excellence in Thesis Preparation — May 2013
Physics Department, Brown University, Providence, RI

Skills

Programming Languages
- Expert: C++, Python, Unix shell (bash, tcsh), Mathematica, LaTeX
- Intermediate: Fortran, Java, MATLAB

Programming Techniques
- Expert: Parallelization (MPI, openMP), Monte Carlo methods
- Intermediate: Machine learning, neural networks