## ADITH RAMAMURTI

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Information

Contact Acoustics Division

U.S. Naval Research Laboratory

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4555 Overlook Ave. SW Washington, DC 20375

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 Lawrence Berkeley National Lab, Berkeley, CA The role of QCD monopoles in jet quenching Jan. 2018

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

XXVIth International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter 2017) Chicago, IL

Feb. 2017

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 and Software

- Expert: C++, Python, Unix shell (bash, tcsh), Mathematica, LATEX
- Intermediate: Fortran, Java, MATLAB, COMSOL

## Programming Techniques

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