ADITH RAMAMURTI

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CONTACT Acoustics Division adith [at] ramamurti.com
INFORMATION U.S. Naval Research Laboratory adith.ramamurti [at] nrl.navy.mil

4555 Overlook Ave. SW Washington, DC 20375

EMPLOYMENT Research Physicist Nov. 2018 - Present

Acoustics Division, U.S. Naval Research Laboratory,

Washington, DC

Graduate Research Assistant

Physics Department, Stony Brook University

Stony Brook, NY

Jan. 2015 - Nov. 2018

May 2015 - Aug. 2015

Mar. 2014 - Aug. 2014

Graduate Teaching Assistant

Aug. 2015 - Dec. 2015

Physics Department, Stony Brook University

Aug. 2014 - May 2015

Stony Brook, NY

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 D. C. Calvo, Multisector parabolic equation approach to compute acoustic scattering by non-canonically shaped impenetrable objects, Physical Review E (accepted, in production), arXiv:1912.02406 [physics.comp-ph].

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

178th Meeting of the Acoustical Society of America

Dec. 2019

San Diego, CA

Application of a multi-sector parabolic equation approach to compute acoustic scattering by non-canonically shaped impenetrable objects

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

Jan. 2018

JETSCAPE Winter School and Workshop Lawrence Berkeley 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 Nucleus-Nucleus Collisions (Quark Matter 2017)

Feb. 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 Physics Department, Brown University, Providence, RI May 2013

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