ADITH RAMAMURTI

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PROFESSIONAL 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, *Application of machine learning in Bose-Einstein condensation critical-temperature analyses of path-integral Monte Carlo simulations*, arXiv:1912.00654 [cond-mat.stat-mech].

A. Ramamurti and D. C. Calvo, *Multisector parabolic equation approach to compute acoustic scattering by noncanonically shaped impenetrable objects*, Physical Review E **100**, 063309, 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, *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 Coronado, CA *Application of a multi-sector parabolic equation approach to compute acoustic scattering by non-canonically shaped impenetrable objects* Abstract: J. Acoust. Soc. Am. **146**, 3037	Dec. 2019
	Gauge Topology III: From Lattice to Colliders European Center for Theoretical Physics, Trento, IT *Recent progress in understanding the role of monopoles in QCD*	May 2018
	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 *An effective model of QCD monopoles* Proceeding: Nuclear Physics A **967**, 868-871, arXiv:1704.04467 [hep-ph].	Feb. 2017
	Gauge Field Topology Workshop Simons Center for Geometry and Physics, Stony Brook, NY *QCD strings and their interactions from the holographic perspective*	Aug. 2015
HONORS AND AWARDS	Jerome and Isabella Karle Fellowship U.S. Naval Research Laboratory, Washington, DC	Nov. 2018 - Nov. 2020
	Mildred G. Widgoff Prize for Excellence in Thesis Preparation Physics Department, Brown University, Providence, RI	May 2013
OTHER EMPLOYMENT	Graduate Research Assistant Dept. of Physics and Astronomy, Stony Brook University Stony Brook, NY	Jan. 2015 - Nov. 2018 May 2015 - Aug. 2015 Mar. 2014 - Aug. 2014
	Graduate Teaching Assistant Dept. of Physics and Astronomy, Stony Brook University Stony Brook, NY	Aug. 2015 - Dec. 2015 Aug. 2014 - May 2015
	Undergraduate Research Assistant Physics Department, Brown University Providence, RI	May 2012 - Aug. 2012 May 2011 - Aug. 2011
	Physical Science Aid Acoustics Division, U.S. Naval Research Laboratory Washington, DC	Dec. 2010 - Jan. 2011 Jun. 2008 - Aug. 2008 Jun. 2007 - Aug. 2007

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