

## Curriculum Vitae

- Name:** Raju Venugopalan
- Education:** B.S., University of Chicago, *June 1987*.  
Ph.D., Stony Brook, *August 1992*.
- Post-doctoral appointments:** *September 1992-August 1994*, Research Associate, Theoretical Physics Institute, Univ. of Minnesota, Minneapolis, MN  
*September 1994-December 1996*, Research Associate, National Institute for Nuclear Theory, Univ. of Washington, Seattle, WA  
*January 1997-September 1998*, Danish Research Council Fellow, Niels Bohr Institute, Copenhagen, Denmark
- Faculty appointments:** *October 2016-present*, Group Leader, Nuclear Theory Group, BNL  
*Sept. 2015-Sept. 2016*, Excellence Initiative Guest Professor, Institute for Theoretical Physics, Heidelberg University, Germany  
*June 2010-July 2015*, Group Leader, BNL Nuclear Theory  
*March 2007-present*, Senior Scientist, BNL  
*March 2009-present*, Adjunct Professor, Stony Brook University  
*Oct.98-March 2007*, Asst., Assoc. and Physicist appointments, BNL  
Awarded Tenure, June 2002.
- Honors:** Suffolk County NY Distinguished Asian American Award (2019)  
BNL Science & Technology Award (2018)  
Humboldt Research Award ("Humboldt Prize", October 2016 -)  
Excellence Initiative Award and Chair, Heidelberg University (2014-2016); EMMI Visiting Professor (2014)  
Fulbright Senior Specialist Award (2012)  
Fellow of the American Physical Society (2007-)  
A. Von Humboldt Foundation US Research Fellow (2004-2005)  
Fellow RIKEN-BNL Research Center (2000-2003)  
Univ. of Chicago Undergraduate Scholarship (1984-1987)
- Service/Key Appointments:** Director's Review Committee, Tata Institute (TIFR), Mumbai, India (March 2019)  
Academy President's Review Committee, Austrian Academy of Sciences (June 2018)  
Co-chair, Program Steering Committee, Joint BNL/Stony Brook Center for Frontiers in Nuclear Science (2018-)  
International Advisory Board, INCT-FNA (Brazil), (2017-)  
Member, German SFB ISOQUANT Research Collaboration, Heidelberg University (2016-)

Co-PI on two DOE Topical Theory Collaborations  
 Director's Review Committee of the Nuclear Science Division,  
 Lawrence Berkeley Lab (October 2016)  
 EMMI (GSI, Germany) Scientific Advisory Committee (2016-)  
 APS Division of Nuclear Physics Executive Committee (2016-2018)  
 National Advisory Committee, INT Seattle (2015-2017)  
 Chair-line, APS Topical Group on Hadron Physics (2014-17)  
 Editor, Annals of Physics (2013-); Editorial College, SciPost (2019-)  
 DOE Nuclear Science Advisory Council (NSAC) member (2012-  
 2016) and Member, NSAC Long Range Plan Working Group  
 Chair, BNL Council (2010-2011)  
 International Conference Advisory Committees: Quark Matter  
 (QM15, QM17, QM18, QM19), Quarks in Nuclear Physics (QNP15,  
 QNP18, QNP21), Initial Stages (IS13, IS14, IS16, IS17, Co-Chair 19,  
 IS21), Hard Probes (HP18, HP20), Founder of Conf. Series and IAC,  
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## Scientific Activity

Author of 158 published papers with ~19,600 citations -- amongst  
 most highly cited in peer group worldwide. H-index of 68 (INSPIRE)  
 From January 2010 – March 2020, published 75 papers (19 Letter  
 publications), cited 7300 times: comparable to highest cited nuclear,  
 particle and condensed matter theorists worldwide  
 Most highly cited paper has ~1930 citations. 4 other papers with 500+  
 citations, 11 with 250+, 34 with 100+ citations and 34 with 50+  
 citations  
 ~ 40 Departmental Colloquia worldwide since 2011, numerous  
 plenary and invited talks at international conferences  
 Ph. D advisor to Mark Mace (Stony Brook, August 2019), Kaushik  
 Roy (anticipated, August 2020); co-supervised/mentored numerous  
 Masters and Ph.D students.

## Research Highlights:

- i) Co-author of Color Glass Condensate (CGC) Effective Theory of  
 Quantum Chromodynamics -- work initiated a sub-field of theoretical  
 nuclear physics. (Two topical reviews with  $\geq 500$  citations each.)  
 Recent advance: first computation of NLO impact factor for  
 photons+dijets at small  $x$  (with Roy)
- ii) Pioneered numerical and analytical techniques in real time  
 classical-statistical field theory. Recent discoveries/advances include  
 -- world-line formalism for chiral kinetic theory, small- $x$  QCD  
 -- non-equilibrium topological "sphaleron" transitions  
 -- universal, non-thermal fixed points in scalar and gauge theories
- iii) Co-inventor of the IP-Glasma model, which provides the most  
 successful description to date of high energy heavy-ion collisions
- iv) Invented novel formalism for multiparticle production in strong  
 fields. Applied such ideas to construct factorization theorems and to

numerous applications in hadron-hadron collisions

v) Early proponent of science case for an Electron-Ion Collider (EIC); principal organizer, first eRHIC conference (December 1999); pioneering computations illustrated scientific possibilities inherent in such a machine.

**Other Highlights:**

i) In 2013, during my tenure as Group Leader, the BNL NT Group was *top-rated amongst 62 supported university and national lab groups* in a DOE Comparative Review.

ii) Co-Author of May 2015 feature article “The glue that binds us all”, in Scientific American (widely translated worldwide and *cover story* of French Edition).

iii) Co-organized first INT Program and Report on EIC Science – this 2011 document has ~ 500 citations to date

**Webpage:**

<https://www.bnl.gov/physics/NTG/people/venugopalan.php>