

NEELIMA SEHGAL

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POSITIONS

- **Stony Brook University** - Associate Professor in Physics and Astronomy -
Sept. 2018 - present
- **Stony Brook University** - Assistant Professor in Physics and Astronomy -
Sept. 2012 - Aug. 2018
- **Princeton University** - NSF Postdoctoral Fellow - *Sept. 2011 - Sept. 2012*
- **Stanford University/SLAC** - KIPAC Postdoctoral Fellow - *Oct. 2008 - Sept. 2011*

EDUCATION

- **Rutgers University**—Department of Physics and Astronomy
PhD in Astrophysics - May 2008
- **Yale University**—Department of Physics and Mathematics
B.S. in Physics and Mathematics - May 1999
Distinction in Physics and Mathematics

CURRENT RESEARCH INTERESTS

- Dark Matter, Early Universe, Neutrino Physics, Dark Energy
- Cosmic Microwave Background
- Quantum Foundations

FELLOWSHIPS, HONORS, AND AWARDS

- Stony Brook Discovery Prize Finalist (2017)
- NSF Postdoctoral Fellowship (Sept. 2011 - Sept. 2012 at Princeton University)
- NSF Postdoctoral Fellowship (2008, declined)
- University and Bevier Dissertation Fellowship, Rutgers (2007-2008)
- GAANN fellowship, Rutgers (2003-2004)
- GAANN fellowship, Rutgers (2000-2001)
- Deforest Senior Prize in Mathematics, Yale (1999)

GRANTS

- **Department of Energy, High Energy Physics Theory—2019-2022**
Awarded Resources: \$280,000
- **National Science Foundation, Astronomy & Astrophysics Grant—2019-2022**
Awarded Resources: \$347,148
- **Brookhaven National Laboratory LDRD—2019-2022**
Awarded Resources: \$306,177
- **Stony Brook-Brookhaven Research Initiative SEED Grant—2016-2017**
Awarded Resources: \$35,400
- **LSSTC Enabling Science Grant and Simonyi-Gates Matching Funds—2016**
Awarded Resources: \$11,000
- **National Science Foundation, Astronomy & Astrophysics Grant—2015-2018**
Awarded Resources: \$560,000
- **Stony Brook-Brookhaven Research Initiative SEED Grant—2013-2014**
Awarded Resources: \$32,000

PROFESSIONAL ACTIVITY AND SERVICE

- Collaboration Leadership:
 - PI of CMB-HD Collaboration, 2019 - present (<https://cmb-hd.org>)
 - Co-lead of Simons Observatory Lensing Science Working Group, 2016 - present
 - Co-lead of ACTPol/AdvACT Lensing Science Working Group, 2014 - present
- Workshop Organizer:
 - "The CMB in HD: the low-noise high-resolution frontier" at the CCA, Dec. 2018
 - "LSST Dark Energy Science Collaboration Meeting" at Stony Brook, July 2017
 - "Cross-correlation Spectacular with LSST" at Stony Brook/BNL, May 2016
 - "Cosmological Implications of the EBL" at KIPAC/SLAC, Dec. 2009
- Convener:
 - Co-convener of the "Cosmology and Dark Energy" working group for the APS Division of Particles and Fields (DPF) meeting in Boston, Aug 2019
 - Co-convener of the "Cosmic Physics" working group for the Conference on the Intersections of Particle and Nuclear Physics (CIPANP18) in Palm Springs, CA, May/June 2018
 - Co-convener of the "Cosmology and Astrophysics" working group for the APS Division of Particles and Fields (DPF) meeting at Fermilab, July/Aug 2017

- Lecturer at Summer School:
 - DMSS: A Dark Matter Summer School, University at Albany, SUNY, July 2018
 - Theoretical Advanced Study Institute in Elementary Particle Physics (TASI), "Anticipating the Next Discoveries in Particle Physics", Boulder CO 2016
- Review panel member:
 - NASA, NSF, DOE, 2011 - present
- Co-Lead of CMB-S4 Membership Working Group, Fall 2017-Spring 2018
- Lead editor of the CMB Lensing Chapter of the CMB-S4 Science Book, 2015-2016
- Referee for *Physical Review D*, *JCAP*, *Astronomy & Astrophysics*, *Monthly Notices of the Royal Astronomical Society*, *The Astrophysical Journal*

FORMER ADVISEES:

- Ho Nam Nguyen - currently PhD student at University of Berkeley
- William Tyndall - currently PhD student at Yale University
- Dongwon Han - currently Postdoc at Cambridge University
- Mat Madhavacheril - currently Faculty at University of Southern California
- Alex van Engelen - currently Faculty at Arizona State University

UNIVERSITY SERVICE

- Played integral role in creation of new Cosmology Cluster initiative at Stony Brook University resulting in four new Cosmology faculty positions, 2013

TEACHING EXPERIENCE

- AST 101 - Undergraduate Introduction to Astronomy
- AST 347 - Undergraduate Cosmology
- PHY 524 - Graduate Cosmology
- PHY 688 - Graduate Special Topics in Astrophysics - "The Dark Universe"

INVITED COLLOQUIA, SEMINARS, AND TALKS

* 60 invited talks

1. Waterloo Centre for Astrophysics Astro Seminar, January 20, 2021
2. University of Albany Physics Colloquium, Albany, NY, March, 6, 2020
3. Cosmological Frontiers in Fundamental Physics, Perimeter Institute, Sept, 19, 2019
4. STRONG-DM 2019, Vienna, Austria, Aug, 19, 2019
5. LSST Dark Matter Workshop, Chicago, IL, Aug. 6, 2019
6. Brookhaven National Laboratory HET Lunch Seminar, Brookhaven, July 19, 2019
7. AAS Special Session on Cosmological Probes of Dark Matter, June 10, 2019
8. NASA Goddard Physics Colloquium, Baltimore, MD, May 21, 2019
9. In Pursuit of New Particles and Paradigms, Aspen, March, 26, 2019
10. Accurate Lensing in the Era of Precision Cosmology, Berkeley, CA, Jan. 14, 2019
11. Novel Instrumentation for Fundamental Physics, Puerto Rico, November 30, 2018
12. Yale University Physics Colloquium, November 26, 2018
13. University of Toronto Physics Colloquium, October 25, 2018
14. NYU CCPP Astro Seminar, September 18, 2018
15. Conference on Shedding Light on the Dark Universe with Extremely Large Telescopes, Trieste, Italy, July 3, 2018
16. CDM18 Workshop, KITP, Santa Barbara, CA, May 25th, 2018
17. CDM18 Conference, KITP, Santa Barbara, CA, May 1st, 2018
18. American Physical Society Mid-Atlantic Section, Newark, NJ, Nov. 4, 2017
19. Kavli CMB Lensing Workshop, Stanford, CA, September 13, 2017
20. Fermilab Colloquium, Batavia IL, November 30, 2016
21. York University Physics & Astronomy Colloquium, Toronto, Canada, Oct. 18, 2016
22. U.S. RMS Futures II, HERA Session, Baltimore, MD, August, 4, 2016
23. U.S. RMS Futures II, CMB Session, Baltimore, MD, August, 3, 2016
24. Light Dark World International Forum 2016, Daejeon, South Korea, July 12, 2016
25. Neutrinos and Light Particles in Cosmology, Berkeley, CA, June 23, 2016
26. University of Michigan Physics Seminar, Ann Arbor, MI, March 28, 2016
27. Canadian Institute of Theoretical Physics Seminar, Canada, Nov. 5, 2015

28. BNL DOE Cosmic Visions Talk, New York, NY, Oct. 17, 2015
29. Gruber Cosmology Conference, Yale University, New Haven, CT, Oct. 2, 2015
30. Brookhaven National Laboratory Physics Seminar, New York, NY, Sept. 17, 2015
31. CCAPP Seminar, Ohio State University, Columbus, OH, October 27, 2014
32. Rutgers University Astronomy Talk, New Brunswick, NJ, October 25, 2014
33. HPS Collaboration Meeting, VA, June 17, 2014
34. Dark Interactions, Brookhaven National Lab, NY, June 12, 2014
35. NY section of the APS meeting, SUNY Oswego, NY, April 25, 2014
36. Simons Center for Geometry and Physics Seminar, Stony Brook, NY, March 25, 2014
37. American Museum of Natural History, New York, NY, January 14, 2014
38. Princeton/IAS Cosmology Lunch, Princeton, NJ, October 21, 2013
39. Tri-State Astronomy Conference, New York, NY, September 27, 2013
40. Simons Center for Geometry and Physics Seminar, Stony Brook, NY, April 16, 2013
41. American Physical Society Invited Session, Denver, CO, April 14, 2013
42. Particle Physics Seminar, Stony Brook University, Stony Brook, NY, Dec. 3, 2012
43. A New Era for SZ Science, Santander, Spain, June 27, 2011
44. Stony Brook University Physics and Astronomy Seminar, NY, May 10, 2011
45. San Francisco State University, Physics & Astronomy Colloquium, April 11, 2011
46. Santa Cruz FLASH Seminar, CA, March 11, 2011
47. Canadian Institute of Theoretical Physics Seminar, Canada, Feb. 3, 2011
48. University of Waterloo Astro Lunch Talk, Canada, Feb. 2, 2011
49. Perimeter Institute Cosmology and Gravitation Seminar, Canada, Feb. 1, 2011
50. Chicago KICP Seminar, Chicago, IL, Jan. 28, 2011
51. Lawrence Livermore National Lab Physics Seminar, CA, Jan. 21, 2011
52. AAS Special Session: Cluster Cosmology with Optical and SZ, Seattle, Jan. 12, 2011
53. Caltech Astronomy Colloquium, Pasadena, CA, Dec. 15, 2010
54. Berkeley Cosmology Seminar, U.C. Berkeley, Berkeley, CA, Nov. 23, 2010
55. Stanford Astrophysics Colloquium, Stanford, Palo Alto, CA, May 20, 2010
56. University of Pennsylvania Cosmology Seminar, Philadelphia, PA, Jan. 16, 2008

57. Berkeley Cosmology Seminar, Berkeley, CA, Dec. 18, 2007
58. University of California at Davis Cosmology Seminar, Davis, CA, Dec. 17, 2007
59. Princeton Wunch Talk, Princeton, NJ, Dec. 5, 2007
60. Harvard Center for Astrophysics HEAD Lunch Talk, Boston, MA, Nov. 10, 2007