Nikhil Padmanabhan

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Personal Born Sept. 14, 1979, Indian citizen

Current Position Hubble Fellow, Chamberlain Fellow, Physics Division, Lawrence Berkeley Laboratory

Research Interests

- Large scale structure: galaxy surveys, CMB, weak lensing
- Cosmological parameter estimation
- Galaxy formation and structure
- Data analysis algorithms
- Astrophysical probes of particle physics
- Member, Sloan Digital Sky Survey (SDSS) collaboration

Academic Qualifications

- **Princeton University (2001-2006)** Ph.D. program, Physics
- **Stanford University (1997 - 2001)** B.S. in Physics with Honours and Distinction. Minor in Mathematics

Awards, Grants

- Hubble Fellow, Lawrence Berkeley Laboratory (2006-)
- Chamberlain Fellow, Lawrence Berkeley Laboratory (2006-)
- Departmental Teaching Award, Princeton University (2006)
- Graduate Fellow, Forbes College, Princeton University (2005-2006)
- Centennial Fellow, Princeton University (2001-)
- Member, Phi Beta Kappa, Stanford Chapter (elected 2001)
- Hoefer Prize for Excellence in Undergraduate Writing, Stanford (2001)
- Undergraduate Research Opportunities Major Grant Recipient, Stanford (2000)
- Bing Research Scholarship, Stanford (1998)
- President's Scholar, Stanford (1997)

Teaching

- Teaching Assistant, *Advanced Freshman Physics*, Princeton, 2005
- Teaching Assistant, *General Physics*, Princeton, 2005
- Teaching Assistant, *Relativistic Quantum Mechanics*, Princeton, 2004
- Teaching Assistant, *Introductory Physics*, Princeton, 2002-2003
- Teaching Assistant, *Introductory Physics*, Stanford, 2000-2001

References

- **Prof. Uroš Seljak**
  Dept. of Physics, Jadwin Hall,
  Princeton University,
  Princeton, NJ 08544, USA
  `useljak@princeton.edu`
- **Prof. Michael A. Strauss**
  Dept. of Astrophysical Sciences, Peyton Hall,
  Princeton University,
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- **Prof. James E. Gunn**
  Dept. of Astrophysical Sciences, Peyton Hall,
  Princeton University,
  Princeton, NJ 08544, USA
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Publications

1. *Cosmological production of H_2 before the formation of the first galaxies*, Hirata, C. M., **Padmanabhan, N.**, MNRAS accepted, astro-ph/0606437
2. *Cosmological Constraints from the SDSS Luminous Red Galaxies*, Tegmark, M., Eisenstein, D. J., Strauss, M. A., et al, PRD submitted, astro-ph/0608632
3. *The Clustering of Luminous Red Galaxies in the Sloan Digital Sky Survey Imaging Data*, **Padmanabhan, N.**, Schlegel, D. J., Seljak, U., et al, MNRAS submitted, astro-ph/0605302
4. *SDSS J103913.70+533029.7: A Super Star Cluster in the Outskirts of a Galaxy Merger*, Knapp, G. R., et al, AJ, 131, 859, 2006
5. *The Fourth Data Release of the Sloan Digital Sky Survey*, Adelman-McCarthy, J. K., et al, ApJS, 162, 38, 2006
6. *Correlating the CMB with Luminous Red Galaxies : The Integrated Sachs-Wolfe Effect*, **Padmanabhan, N.**, Hirata, C. M., Seljak, U., et al, PRD, 72, 043525, 2005, astro-ph/0410360
7. *Systematic errors in weak lensing: application to SDSS galaxy-galaxy weak lensing*, Mandelbaum, R., Hirata, C. M., Seljak, U., Guzik, J.,**Padmanabhan, N.**, et al, MNRAS, 361, 4, 1287, 2005
8. *Detecting Dark Matter Annihilation with CMB Polarization : Signatures and Experimental Prospects*, **Padmanabhan, N.**, Finkbeiner, D. P., PRD, 72, 2, 023508, 2005, astro-ph/0503486
9. *Calibrating Photometric Redshifts of Luminous Red Galaxies*, **Padmanabhan, N.**, Budavari, T., Schlegel, D. J., et al, MNRAS, 359, 237, 2005, astro-ph/0407594
10. *Mid-Infrared and Visible Photometry of Galaxies: Anomalously Low Polycyclic Aromatic Hydrocarbon Emission from Low-Luminosity Galaxies*, Hogg. D. W., Tremonti, C. A., Blanton, M. R., Finkbeiner, D. P., **Padmanabhan, N.**, et al, ApJ, 624, 162, 2005
11. *The Third Data Release of the Sloan Digital Sky Survey*, Abazajian, K., et al, AJ, 129, 1755, 2005
12. *SDSS galaxy bias from halo mass-bias relation and its cosmological implications*, Seljak, U., Makarov, A., Mandelbaum, R., Hirata, C. M., **Padmanabhan, N.**, et al, PRD, 71, 043511, 2005
13. *GRB050509b, SDSS pre-burst observations*, Eisenstein, D. J., Hogg, D. W., **Padmanabhan, N.**, GRB Coordinates Network, Circular Service, 3418, 1, 2005
14. *Cross-correlation of CMB with large-scale structure: Weak gravitational lensing*, Hirata, C. M., **Padmanabhan, N.**, Seljak, U., et al, PRD, 70, 103501, 2004, astro-ph/0406004

15. *Sloan Digital Sky Survey Imaging of Low Galactic Latitude Fields: Technical Summary and Data Release*, Finkbeiner, D. P., **Padmanabhan, N.**, Schlegel, D. J., et al, AJ, 128, 2577, 2004, astro-ph/0409700
16. *Galaxy-galaxy weak lensing in the Sloan Digital Sky Survey: intrinsic alignments and shear calibration errors*, Hirata, C. M., Mandelbaum, R., Seljak, U., Guzik, J., **Padmanabhan, N.**, et al, MNRAS, 353, 529, 2004
17. *The Second Data Release of the Sloan Digital Sky Survey*, Abazajian, K., et al, AJ, 128, 502, 2004
18. *Stellar and dynamical masses of ellipticals in the Sloan Digital Sky Survey*, **Padmanabhan, N.**, Seljak, U., Strauss, M. A., et al, New Astronomy, 9, 329, 2004, astro-ph/0307082
19. *SDSS data management and photometric quality assessment*, Ivezic, Z., Lupton, R. H., Schlegel, D., Boroski, B., Adelman-McCarthy, J., Yanny, B., Kent, S., Stoughton, C., Finkbeiner, D., **Padmanabhan, N.**, et al, Astronomische Nachrichten, 325, 583, 2004
20. *The First Data Release of the Sloan Digital Sky Survey*, Abazajian, K., et al, AJ, 126, 2081, 2003
21. *Mining Weak Lensing Surveys*, **Padmanabhan, N.**, Seljak, U., Pen, U. L., New Astronomy, 8, 581, 2003, astro-ph/0210478
22. *Stellar masses and star formation histories for 10^5 galaxies from the Sloan Digital Sky Survey*, Kauffmann, G., et al, MNRAS, 341, 33, 2003
23. *Linear Redshift Distortions and Power in the PSCz Survey*, Hamilton, A. J. S., Tegmark, M., **Padmanabhan, N.**, MNRAS, 317, L23, 2000, astro-ph/0004334
24. *The Power Spectrum of the Cfa/SSRSS UZC Galaxy Redshift Survey*, **Padmanabhan, N.**, Tegmark, M., Hamilton, A. J. S., ApJ., 550, 52, 2001, astro-ph/9911421