

# Vita for Samir D. Mathur

**Degrees:** MS Physics, IIT Kanpur (1981)  
Ph.D. in Physics, University of Bombay (1987)

**Positions held:** Postdoctoral Fellow, Tata Institute (Bombay) 1987-89  
Postdoctoral Fellow, Harvard University 1989-91  
Assistant Professor, MIT 1991-97  
Associate Professor, MIT 1997-99  
Associate Professor, Ohio State, 1999-02  
Professor, Ohio State, 2002-

**Awards and distinctions:** Best outgoing student, M.S. Physics (Integrated) I.I.T. Kanpur (1981); Indian National Science Academy (INSA) S.N. Bose Young Scientist Award (1984); Honorable mention in Gravity Research Foundation Essay competitions (2000, 2002, 2003, 2007, 2009); Alumni Award for Distinguished Teaching (Ohio State University) (2003); Society of Physics Students (Ohio State) award for Teaching (2003).

## Recent Publications (Research papers, Reviews, Proceedings 2007-2009):

1. **“The information paradox: A pedagogical introduction”**  
S. D. Mathur  
Class. Quant. Grav. **26**, 224001 (2009) [arXiv:0909.1038 [hep-th]]
2. **“Emission from the D1D5 CFT”**  
S. G. Avery, B. D. Chowdhury and S. D. Mathur  
JHEP **0910**, 065 (2009) [arXiv:0906.2015 [hep-th]]
3. **“How fast can a black hole release its information?”**  
S. D. Mathur  
arXiv:0905.4483 [hep-th]
4. **“Non-extremal fuzzballs and ergoregion emission”**  
B. D. Chowdhury and S. D. Mathur  
Class. Quant. Grav. **26**, 035006 (2009) [arXiv:0810.2951 [hep-th]]
5. **“Fuzzballs and the information paradox: a summary and conjectures”**  
S. D. Mathur  
Advanced Science Letters Volume **2**, Number 2, (2009) pg 133.  
arXiv:0810.4525 [hep-th]
6. **“Pair creation in non-extremal fuzzball geometries”**  
B. D. Chowdhury and S. D. Mathur  
Class. Quant. Grav. **25**, 225021 (2008) [arXiv:0806.2309 [hep-th]]
7. **“Tunneling into fuzzball states”**  
S. D. Mathur  
General Relativity and Gravitation (2010) **42**, pg. 113.  
arXiv:0805.3716 [hep-th]
8. **“What Exactly is the Information Paradox?”**  
S. D. Mathur  
Lect. Notes Phys. **769**, 3 (2009) [arXiv:0803.2030 [hep-th]]

9. **“What is the state of the Early Universe?”**  
S. D. Mathur  
J. Phys. Conf. Ser. **140**, 012009 (2008) [arXiv:0803.3727 [hep-th]]  
*To appear in the proceedings of 6th International Conference on Gravitation and Cosmology (ICGC-2007), Ganeshkhind, Pune, India, 17-21 Dec 2007*
10. **“Radiation from the non-extremal fuzzball”**  
B. D. Chowdhury and S. D. Mathur  
Class. Quant. Grav. **25**, 135005 (2008) [arXiv:0711.4817 [hep-th]]
11. **“Black hole size and phase space volumes”**  
S. D. Mathur, arXiv:0706.3884 [hep-th]
12. **“Falling into a black hole”**  
S. D. Mathur, Int. J. Mod. Phys. D **17**, 583 (2008) [arXiv:0705.3828 [hep-th]]
13. **“Fractional brane state in the early universe”**  
B. D. Chowdhury and S. D. Mathur  
Class. Quant. Grav. **24**, 2689 (2007) [arXiv:hep-th/0611330]
14. **“A microscopic model for the black hole - black string phase transition”**  
B. D. Chowdhury, S. Giusto and S. D. Mathur  
Nucl. Phys. B **762**, 301 (2007) [arXiv:hep-th/0610069]
15. **“A microstate for the 3-charge black ring”**  
S. Giusto, S. D. Mathur and Y. K. Srivastava  
Nucl. Phys. B **763**, 60 (2007) [arXiv:hep-th/0601193]

#### Recent Invited talks (2009)

1. *“Resolving the black hole information paradox”*, Colloquium at Univ. of Toronto, Oct. 2009.
2. *“What is the state of the early Universe?”*, Invited talk at Holographic Cosmology Workshop, Mc Gill University, Oct 2009.
3. *“Resolving the information paradox”*, Invited talk at ‘Quantum Theory and Symmetries’ Univ of Kentucky, July 2009.
4. *Intensive course on black holes*, SISSA, Aug 2009 (10 hours of lectures).
5. *“Resolving the information paradox”*, Invited talk at ‘Recent Advances in String Theory’ (14th Itzykson Meeting) Paris, June 2009.
6. *“Resolving the information paradox”*, Invited talk at ‘Great Lakes String Conference 2009’ Univ of Kentucky, April 2009.
7. *“Resolving the black hole information paradox”*, Colloquium at Brown Univ, , Feb. 2009.
8. *“The black hole information paradox”*, Four winter school lectures at RTN school held at CERN, Feb 2009.
9. *“Resolving the black hole information paradox”*, Invited talk at Workshop on black holes, Perimeter Institute, Waterloo, Jan 2009.