

SENTHIL TODADRI

Curriculum Vitae

Department: Physics
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Professional preparation:

- Master of Science (1992) in Physics, Indian Institute of Technology, Kanpur (India).
- Ph.D in Physics, Yale University, 1997.
Thesis advisor: Prof. Subir Sachdev
- September 1997 to Jan 2001, Postdoctoral Fellow, Kavli Institute for Theoretical Physics, University of California, Santa Barbara.
Postdoctoral Supervisor: Prof Matthew P. A. Fisher.

Employment:

- January 2001 to December 2004, Assistant Professor of Physics, Massachusetts Institute of Technology, Cambridge, MA.
- January 2005 to January 2007 (on leave from MIT): Associate Professor of Physics, Indian Institute of Science, Bangalore (India).
- January 2007 to June 2011: Associate Professor of Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts.
- July 2011- present: Professor of Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Honors and awards:

1. Josiah Willard Gibbs Fellowship for the year 1992, Yale University
2. NEC Fund Award from the MIT Research Support Committee, July 2002
3. Alfred P. Sloan Research Fellow, Sept. 2002- Sept. 2006.
4. Research Innovation Award from The Research Corporation, May 2003.
5. Outstanding Investigator Award from the Science Research Council of the Department of Atomic Energy, India, Aug 2005.

6. Outstanding Young Physicist Award from the American chapter of the Indian Physics Association, March 2009
7. Kavli Frontiers Fellow, The Kavli Foundation, 2011.
8. Distinguished Visiting Research Chair, Perimeter Institute for Theoretical Physics, Waterloo, Canada, 2011-2024.
9. Simons Theoretical Physics Fellowship, 2012-2013.
10. Simons Investigator Award, 2013-2023.
11. Fellow, American Physical Society, 2013.
12. Subrahmanyam Chandrasekhar Lecturer, International Center for Theoretical Sciences, 2015.
13. Clarivate Highly Cited Researcher 2022, cross-field category

Membership:

1. General Member, Aspen Center for Physics, 2010-2020
2. Member, International Advisory Board, International Center for Theoretical Sciences, India, 2015-present.

Service :

1. Co-organizer, Aspen winter conference, January 2022
2. Co-organizer, Aspen summer workshop on "Quantum Spin Liquids", June-July, 2019.
2. Co-organizer, KITP conference on "Closing the entanglement gap: Quantum information, quantum matter, and quantum fields", June 2015.
3. Co-organizer, Boulder summer school on "Superconductivity", July 2014.
4. Co-organizer, Aspen winter conference on "Beyond quasiparticles: new paradigms for quantum fluids", Jan 2014.
3. Co-organizer, Indian condensed matter program, Goa, India, 2007; conference on "Physics near the Mott Transition", Bangalore 2006;
4. Regular referee for Physical Review Letters, Physical Review B, Nature, Nature Physics, Science, and other journals.
5. Referee for grants submitted to US National Science Foundation, Department of Energy.

Ph.D students:

1. Nikolic, Predrag, 2004.
Thesis title: Geometrically frustrated quantum magnets
Subsequent position: Postdoctoral Fellow, Harvard University

Current position: Associate Professor, Dept of Physics, George Mason University.

2. Ghaemi, Pouyan, 2008

Thesis title: Phases and phase transitions of strongly correlated electron systems

Subsequent position: Postdoctoral Fellow, UC Berkeley

Current position: Associate Professor, Dept of Physics, City University of New York

3. Grover, Tarun, 2010

Thesis title: Applied fractionalization: Quantum phases and phase transitions of strongly interacting systems.

Subsequent position: Postdoctoral Fellow, UC Berkeley.

Current position: Assistant Professor, Dept of Physics, UC San Diego

4. Mross, David, 2013

Thesis title: Exotic phases and quantum criticality in gapless correlated electron systems

Subsequent position: IQIM Post-doctoral Fellow, Caltech.

Current position: Assistant Professor, Dept of Physics, Weizmann Institute of Science

5. Wang, Chong, 2015

Thesis title: Entangling symmetry and topology in correlated electrons

Subsequent position: Junior Fellow, Society of Fellows, Harvard.

Current position: Assistant Professor, Perimeter Institute for Theoretical Physics, Canada

6. Pretko, Michael, 2017

Thesis title: Subdimensional Particles and Higher Rank Quantum Phases of Matter

Subsequent position: Postdoctoral Fellow, University of Colorado, Boulder

Current position: Employed by US Dept of Defense

7. Zou, Liujun, 2019

Thesis title: An odyssey in modern quantum many body physics

Current position: Postdoctoral Fellow, Perimeter Institute, Canada

8. Zhang, Yahui, 2019

Thesis title: Bridging Hubbard model physics and quantum Hall physics in graphene moire superlattices

Subsequent position: Postdoctoral Fellow, Harvard University

Current position: Assistant Professor of Physics, Johns Hopkins University

9. Mao, Dan, 2021

Thesis title: Strongly correlated 2d electronic systems: Interplay between band topology and electron-electron interactions

Current position: Postdoctoral Fellow, Cornell University

10. Lake, Ethan, current

11. Dong, Zhihuan, current

12. Musser, Seth, current

13. Zhengyan Shi, current

14. Yunchao Zhang, current

Postdoctoral Fellows:

1. Motrunich, Olexei, 2001-2003 (joint with P.A. Lee)

Current position: Professor of Physics, Caltech.

2. Vishwanath, Ashvin, 2001-2004 (Pappalardo Fellow)

Current position: Professor of Physics, Harvard University.

3. Hermele, Michael, 2005 – 2007 (joint with P.A. Lee and X.G. Wen)

Current position: Professor of Physics, University of Colorado, Boulder.

4. Wang, Fa, 2009 – 2012 (Pappalardo Fellow)

Current position: Associate Professor of Physics, Beijing University, China.

5. Flint, Rebecca, 2010 – 2013 (Simons Fellow)

Current position: Associate Professor of Physics, Iowa State University

6. Nahum, Adam, 2013-2016 (Moore Fellow)

Current position: CNRS faculty, Ecole Normale Supérieure, Paris, France

7. Savary, Lucile, 2014 - 2017 (Moore Fellow)

Current position: CNRS faculty, Ecole Normale Supérieure, Lyon, France

8. Sodemann, Inti, 2014 - 2017 (Pappalardo Fellow)

Current position: Assistant Professor, University of Leipzig, Germany

9. Kimchi, Itamar, 2015 - 2018 (Pappalardo Fellow)

Current position: Assistant Professor, Georgia Tech

10. Lederer, Sam, 2015 - 2018 (Moore Fellow)

Current position: Postdoctoral Fellow, UC Berkeley

11. Chowdhury, Debanjan, 2016-2019 (Moore Fellow)

Current position: Assistant Professor, Cornell University

12. Repellin, Cecile (Marie Curie Fellow), 2017-2019

Current position: CNRS faculty, Univ. Grenoble-Alpes, CNRS, France

13. Bi, Zhen, (Pappalardo Fellow), 2017-2020

Current position: Assistant Professor, PennState University

14. Po, Hoi-Chun (Pappalardo Fellow), 2018-2021

Current position: Assistant Professor, Hong Kong University of Science and Technology

15. Else, Dominic (Moore Fellow), 2018-2021

Current position: Assistant Professor, Perimeter Institute for Theoretical Physics

16. Shapouriyan, Hassan (joint with M. Metlitski and A. Vishwanath), 2019-2020

Current position: Postdoc, Microsoft Station Q, Santa Barbara

17. Goldman, Hart (Moore Fellow), 2020-2023

18. Devkul, Trithep (joint with Liang Fu)

19. Lev Spodeineiko (joint with Xiao-gang Wen)

20. Adarsh Patri

21. Xue-Yang Song (Moore Fellow)

22. Ajesh Kumar (Moore Fellow)