

# IPSITA MANDAL

*Indian Institute of Technology, Kharagpur*

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## Personal Details

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**Mailing address** C/O Jagannath Mandal  
Flat no: 203  
756/757 Sarat Chatterjee Road  
Howrah -- 711104  
West Bengal  
India

**Telephone** +1 4242585743

**E-mail** ipsita.mandal@gmail.com

**Date of Birth** February 1, 1984

**Nationality** Indian

**Gender** Female

## Current Employment (Dec 2016- Present)

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**Position** Assistant Professor in Physics, *Indian Institute of Technology, Kharagpur*

## Qualifications

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**Graduation** Jadavpur University, Kolkata, India  
*Aug 2002 - Jun 2005*  
Aggregate Percentage: 84.5  
Rank: 2  
First-division with Distinction

**Post-Graduation** Integrated M.Sc.-Ph.D. Programme  
*Aug 2005 - Apr 2008*  
Harish-Chandra Research Institute, India  
(Affiliated to: Homi Bhabha National Institute)  
Aggregate Percentage: 84.7

## Doctoral Experience (Apr 2008-Aug 2011)

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**Doctoral Supervisor** Prof. Ashoke Sen  
*Harish-Chandra Research Institute, Allahabad, India*

**Doctoral Thesis** Aspects of Supersymmetric Black Holes and Galilean Conformal Algebras

**Degree Awarded by** Homi Bhabha National Institute, Mumbai, India

**Research Interests** String Theory  
- Black Hole Physics  
- Galilean Conformal Algebras and their supersymmetric extensions

**Reading Projects** - Supersymmetry

- Solitons and Instantons
- String Theory
- Bosonisation in condensed matter systems

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### **Post-Doctoral Experience (Sep 2016- Dec 2016)**

<b>Position</b>	Postdoctoral Researcher, <i>University of Basel</i>
<b>Research Interests</b>	Theoretical Condensed Matter Physics <ul style="list-style-type: none"> <li>- Hybrid superconducting-ferromagnetic systems</li> <li>- Topological Phases</li> <li>- Strongly Correlated Electrons</li> <li>- Non-Fermi Liquids</li> </ul>

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### **Post-Doctoral Experience (Dec 2013- Aug 2016)**

<b>Position</b>	Postdoctoral Researcher, <i>Perimeter Institute for Theoretical Physics</i>
<b>Research Interests</b>	Theoretical Condensed Matter Physics <ul style="list-style-type: none"> <li>- Strongly Correlated Electrons</li> <li>- Non-Fermi Liquids</li> <li>- Renormalization Group</li> <li>- Emergent Gauge Fields in Condensed Matter Systems</li> <li>- Majorana Fermions</li> <li>- Entanglement Entropy</li> </ul>

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### **Post-Doctoral Experience (Sep 2011- Aug 2013)**

<b>Supervisor</b>	Prof. Sudip Chakravarty <i>Department of Physics and Astronomy, UCLA</i>
<b>Position</b>	Postdoctoral Scholar-Employee, <i>University of California Los Angeles</i>
<b>Research Interests</b>	Theoretical Condensed Matter Physics <ul style="list-style-type: none"> <li>- Strongly Correlated Electrons</li> <li>- Unconventional Superconductivity</li> <li>- Majorana Fermions</li> <li>- Entanglement Entropy</li> </ul>

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### **Publications/Pre-prints**

- Interplay of Coulomb interactions and disorder in three dimensional quadratic band crossings without time-reversal or particle-hole symmetry**  
Ipsita Mandal and Rahul M. Nandkishore  
e-Print: arXiv:1709.06580 [cond-mat.str-el]
- Majorana fermions in quasi-one-dimensional systems with in-plane magnetic fields**  
Vardan Kaladzhyan, Julien Despres, Ipsita Mandal and Cristina Bena  
Accepted in Eur. Phys. J. B  
e-Print: arXiv:1611.09367 [cond-mat.supr-con]
- Scaling behaviour and superconducting instability in anisotropic non-Fermi liquids**  
Ipsita Mandal  
Published in Annals of Physics, 376, 89 (2017)  
e-Print: arXiv:1609.00020 [cond-mat.str-el]

- 4. UV/IR Mixing In Non-Fermi Liquids: Higher-Loop Corrections In Different Energy Ranges**  
Ipsita Mandal  
Published in Eur. Phys. J. B (2016) 89: 278  
e-Print: arXiv:1608.06642 [cond-mat.str-el]
- 5. Superconducting instability in non-Fermi liquids**  
Ipsita Mandal  
Published in Phys. Rev. B 94, 115138 (2016)  
e-Print: arXiv:1608.01320 [cond-mat.str-el]
- 6. Super-GCA connection with tensionless strings: Addendum to "Super-GCA from  $N=(2,2)$  super-Virasoro"**  
Ipsita Mandal  
Published in Physics Letters B 760 (2016) 832-834  
e-Print: arXiv:1607.02439 [hep-th]
- 7. Hyperscaling violation at the Ising-nematic quantum critical point in two dimensional metals**  
Andreas Eberlein, Ipsita Mandal and Subir Sachdev  
Published in Phys. Rev. B 94, 045133 (2016)  
e-Print: arXiv:1605.00657 [cond-mat.str-el]
- 8. Geometrical mutual information at the tricritical point of the two-dimensional Blume-Capel model**  
Ipsita Mandal, Stephen Inglis and Roger G. Melko  
Published in J. Stat. Mech. (2016) 073105  
e-Print: arXiv: 1604.02464 [cond-mat.stat-mech]
- 9. Cold atoms in  $U(3)$  gauge potentials**  
Ipsita Mandal and Atri Bhattacharya  
Published in Condens. Matter 2016, 1(1), 2  
e-Print: arXiv: 1603.08526 [cond-mat.quant-gas]
- 10. Super-GCA from  $N = (2, 2)$  Super-Virasoro**  
Ipsita Mandal and Ahmed Rayyan  
Published in Physics Letters B 754, 195 (2016)  
e-Print: arXiv: 1601.04723 [hep-th]
- 11. Counting Majorana bound states using complex momenta**  
Ipsita Mandal  
Published in Condensed Matter Physics, 2016, vol. 19, No. 3, 33703  
e-Print: arXiv:1503.06804 [cond-mat.mess-hall]
- 12. Exceptional points for chiral Majorana fermions in arbitrary dimensions**  
Ipsita Mandal  
Published in EPL, 110 (2015) 67005  
e-Print: arXiv:1503.03839 [cond-mat.mess-hall]
- 13. Exceptional point description of one-dimensional chiral topological superconductors/superfluids in BDI class**  
Ipsita Mandal and Sumanta Tewari  
Published in Physica E: Low-dimensional Systems and Nanostructures 79, 180 (2016)  
e-Print: arXiv:1502.03110 [cond-mat.mess-hall]
- 14. Pairing in half-filled Landau level.**  
Zhiqiang Wang, Ipsita Mandal, Suk Bum Chung and Sudip Chakravarty  
Published in Annals of Physics, 351, 727 (2014)  
e-Print: arXiv:1408.6860 [cond-mat.str-el]
- 15. Ultraviolet/infrared mixing in Non-Fermi Liquids.**  
Ipsita Mandal and Sung-Sik Lee  
Published in Phys. Rev. B 92, 035141 (2015)  
e-Print: arXiv:1407.0033 [cond-mat.str-el]

- 16. Higher angular momentum pairing from transverse gauge interactions.**  
Suk Bum Chung, Ipsita Mandal, S. Raghu and Sudip Chakravarty  
Published in Phys. Rev. B 88, 045127 (2013)  
e-Print: arXiv:1305.3938 [cond-mat.str-el]
- 17. Amplitude mode of the  $d$ -density-wave state and its relevance to high- $T_c$  cuprates.**  
Jay D. Sau, Ipsita Mandal, Sumanta Tewari and Sudip Chakravarty  
Published in Phys. Rev. B 87, 224503 (2013)  
e-Print: arXiv:1207.6834 [cond-mat.supr-con]
- 18. Majorana Zero Modes in a Quantum Ising Chain with Longer-ranged Interactions.**  
Yuezhen Niu, Suk Bum Chung, Chen-Hsuan Hsu, Ipsita Mandal, S. Raghu and Sudip Chakravarty  
Published in Phys. Rev. B 85, 035110 (2012)  
e-Print: arXiv:1110.3072v2 [cond-mat.str-el]
- 19. Logarithmic Corrections to  $N=4$  and  $N=8$  Black Hole Entropy: A One Loop Test of Quantum Gravity.**  
Shamik Banerjee, Rajesh Kumar Gupta, Ipsita Mandal and Ashoke Sen  
Published in JHEP 1111:143,2011  
e-Print: arXiv:1106.0080 [hep-th]
- 20. Black Hole Microstate Counting and its Macroscopic Counterpart.**  
Ipsita Mandal and Ashoke Sen  
Aug 2010. 38pp.  
Published in Class.Quant.Grav.27:214003,2010.  
e-Print: arXiv:1008.3801 [hep-th]
- 21. Supersymmetric Extension of GCA in 2d.**  
Ipsita Mandal  
HRI-ST-1004, Mar 2010. 32pp.  
Published in JHEP 1011:018,2010.  
e-Print: arXiv:1003.0209 [hep-th]
- 22. GCA in 2d.**  
Arjun Bagchi, Rajesh Gopakumar, Ipsita Mandal and Akitsugu Miwa  
HRI-ST-0923, Dec 2009. 45pp.  
Published in JHEP 1008:004,2010.  
e-Print: arXiv:0912.1090 [hep-th]
- 23. Supersymmetry, Localization and Quantum Entropy Function.**  
Nabamita Banerjee, Shamik Banerjee, Rajesh Gupta, Ipsita Mandal and Ashoke Sen  
HRI-ST-0914, May 2009. 31pp.  
Published in JHEP 1002:091,2010.  
e-Print: arXiv:0905.2686 [hep-th]
- 24. Supersymmetric Extension of Galilean Conformal Algebras.**  
Arjun Bagchi and Ipsita Mandal  
May 2009. 20pp.  
Published in Phys.Rev.D80:086011,2009.  
eprint: arXiv:0905.0580 [hep-th]
- 25. On Representations and Correlation Functions of Galilean Conformal Algebras.**  
Arjun Bagchi and Ipsita Mandal  
HRIST0910, Mar 2009. 18pp.  
Published in Phys.Lett.B675:393-397,2009.  
eprint: arXiv:0903.4524 [hep-th]
- 26. Black Hole Hair Removal.**  
Nabamita Banerjee, Ipsita Mandal and Ashoke Sen  
Jan 2009. 30pp.  
Published in JHEP 0907:091,2009.  
ePrint: arXiv:0901.0359 [hep-th]
- 27. Conformal Nonlinear Fluid Dynamics from Gravity in Arbitrary Dimensions.**  
Sayantani Bhattacharyya, R. Loganayagam, Ipsita Mandal, Shiraz Minwalla and Ankit Sharma  
TIFRTH0838, Sep 2008. 39pp.  
Published in JHEP 0812:116,2008.

ePrint: arXiv:0809.4272 [hep-th]

## 28. Critical properties of spherically symmetric black hole accretion in Schwarzschild geometry.

Ipsita Mandal, Arnab K. Ray and Tapas Kumar Das

Feb 2007. 8pp.

Published in Mon.Not.Roy.Astron.Soc.378:14001406,2007.

eprint: astro-ph / 0702733

### Ongoing projects to be completed soon:

1. *Critical properties of the quantum critical point between a normal metal and an FFLO-type superconductor*  
Collaborators: Dimitri Pimenov, Matthias Punk, Francesco Piazza
2. *Polarisation changes and PSG of bosonic U(1) Pyrochlores in electric field*  
Collaborators: Roderich Moessner, Subhro Bhattacharjee, P. V. Sriluckshmy
3. *Detection of Multiple Majorana zero modes with (1) normal and superconducting multimode STM tip, and (2) cavity flux*  
Collaborator: Pablo San-Jose
4. *Stability of time-reversal invariant Majorana Kramers pairs with bulk disorder*  
Collaborators: Manisha Thakurathi, Pascal Simon, Jelena Klinovaja, Daniel Loss
5. *Quantum quench in extended SYK models*  
Collaborators: Sumilan Banerjee, Paul Alexander McClarty
6. *Quantum quench in 3d O(N) rotor models in the large N limit*  
Collaborators: Subhodip Saha, Krishnendu Sengupta

### **Tutoring Experience**

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- **Quantum Field Theory**  
*Spring 2008, HRI*  
Instructor: Prof. Sumathi Rao
- **Mathematical Methods**  
*Fall 2010, HRI*  
Instructor: Dr. Tirthankar Roy Choudhury

### **Supervising Experience**

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- **Essay Title:** *Study of rotating black holes in Kerr spacetime*  
**Student:** *Nguimeya Tematio Gaël-Pacôme*  
*Feb-June 2015*  
**Level:** *AIMS-Cameroon Master's research project*  
*Spring 2015*
  - **Project Title:** *Non-relativistic limit of Superconformal Algebra*  
**Student:** *Ahmed Rayyan, University of Alberta*  
*May-August 2015*  
**Level:** *Perimeter Institute Summer Undergraduate Program 2015*
  - **Project Title:** *Study of non-Fermi liquids*  
**Student:** *Robert Jones, Massachusetts Institute of Technology*  
*June-August 2016*  
**Level:** *Perimeter Institute Summer Undergraduate Program 2016*
  - **Project Topic:** *Multiple Majorana modes*
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**Student:** Arnab Barman Ray, IIT-KGP  
May-July 2017  
**Level:** MSc summer internship, IIT-KGP

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- **Project Topic:** Quantum quench of topological wires hosting Majorana modes  
**Student:** Arnab Barman Ray, IIT-KGP  
August 2017-Dec 2017  
**Level:** MSc Project, IIT-KGP
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- **Project Topic:**  $O(N)$  non-linear sigma model  
**Student:** Subhodip Saha, IIT-KGP  
August 2017-December 2017  
**Level:** MSc Project, IIT-KGP
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## Teaching Experience

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- **First year B.Tech. Lab**  
Spring 2017, IIT-KGP

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  - **Classical Mechanics I**  
Fall 2017, IIT-KGP

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  - **First year B.Tech. Lab**  
Fall 2017, IIT-KGP
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## Schools/Conferences Attended

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- **XXII SERC MAIN SCHOOL in theoretical high energy physics**  
January 18—February 7, 2007  
Hyderabad, India
- **Advanced String Theory School**  
October 8—14, 2007  
Institute of Physics, Bhubaneswar, India
- **From Strings to LHC - II**  
December 11—18, 2007  
Bangalore, India
- **IPM String School and Workshop**  
April 9—17, 2008  
Isfahan, Iran
- **Monsoon workshop on String Theory**  
June 2—August 8, 2008  
Tata Institute of Fundamental Research, Mumbai, India
- **Particle Physics in the Age of the LHC**  
December 29, 2008—January 8, 2009  
Institute for Advanced Studies of the Hebrew University, Jerusalem, Israel
- **Spring School on Superstrings and Related Topics**  
March 23—31, 2009  
International Centre for Theoretical Physics, Trieste, Italy
- **String Theory - Formal Developments and Applications**  
June 21—July 3, 2010  
Cargèse, France
- **ICTS Condensed Matter Programme 2010**  
December 12—23, 2010

Infosys Campus, Mysore, India

- **Topological States in Condensed Matter Physics**  
*December 27, 2010—January 4, 2011*  
Institute for Advanced Studies of the Hebrew University, Jerusalem, Israel
- **Novel Paradigms for Low-Dimensional Electronic Materials**  
*February 5 - 10, 2012*  
Aspen Center for Physics, Aspen, USA
- **Correlated Electron Systems**  
*June 24— 29, 2012*  
Mount Holyoke College, South Hadley, USA
- **APS March Meeting 2013**  
*March 18 - 22, 2013*  
Baltimore, Maryland, USA
- **Emergence in Complex Systems**  
*February 10 - 14, 2014*  
Perimeter Institute, Waterloo, Canada
- **4 Corners Southwest Ontario Condensed Matter Physics Symposium 2014**  
*May 1, 2014*  
Perimeter Institute, Waterloo, Canada
- **Quantum Many Body Dynamics**  
*May 12 - 16, 2014*  
Perimeter Institute, Waterloo, Canada
- **Progress and Applications of Modern Quantum Field Theory**  
*February 16 - 21, 2015*  
Aspen Center for Physics, Aspen, USA
- **Physics of Interfaces and Layered Structures**  
*August 24 - September 8, 2015*  
Nordita, Sweden
- **It from Qubit Summer School**  
*July 18 - July 29, 2016*  
Perimeter Institute, Waterloo, Canada
- **Quantum Machine Learning**  
*Aug 08 - 12, 2016*  
Perimeter Institute, Waterloo, Canada

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### Visiting scientist positions

- **Max Planck Institute for the Physics of Complex Systems**  
*May 7 - July 16, 2017*  
Project Topic: Quantum Spin Liquids  
Collaborator: Roderich Moessner
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- **Cornell University**  
Invited as a Visiting Faculty member in the year 2018

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### Invited Seminars/Talks

- **Black Hole Hair Removal**  
*March 20, 2009*  
University of Rome, Tor Vergata
- **Supersymmetry, Localization and Quantum Entropy Function**  
*March 3, 2010*  
ETH, Zurich
- **Supersymmetry, Localization and Quantum Entropy Function**  
*March 8, 2010*  
CERN
- **Supersymmetry, Localization and Quantum Entropy Function**  
*April 9, 2010*  
University of Amsterdam
- **Supersymmetry, Localization and Quantum Entropy Function**  
*April 16, 2010*  
Utrecht University
- **Supersymmetry, Localization and Quantum Entropy Function**  
*June 10, 2010*  
DAMTP, Cambridge
- **Supersymmetry, Localization and Quantum Entropy Function**  
*June 14, 2010*  
Queen Mary, University of London
- **(Super)Galilean Conformal Algebras**  
*June 18, 2010*  
Swansea University
- **Amplitude Mode of the d-Density Wave State and its Relevance to High- $T_c$  Cuprates**  
*October 31, 2012*  
Caltech, California
- **Amplitude Mode of the d-Density Wave State and its Relevance to High- $T_c$  Cuprates**  
*January 9, 2013*  
UBC, Vancouver (Web seminar)
- **Superconductivity in a model involving transverse gauge bosons**  
*March 21, 2013*  
APS March Meeting 2013
- **Supersymmetry, Localization and Quantum Entropy Function**  
*April 21, 2010*  
Université libre de Bruxelles
- **Supersymmetry, Localization and Quantum Entropy Function**  
*April 29, 2010*  
Ludwig-Maximilians-Universität Munich
- **Supersymmetry, Localization and Quantum Entropy Function**  
*May 3, 2010*  
AEI, Potsdam
- **Supersymmetry, Localization and Quantum Entropy Function**  
*May 14, 2010*  
Universitat de Barcelona
- **Supersymmetry, Localization and Quantum Entropy Function**  
*June 7, 2010*  
Edinburgh Mathematical Physics Group
- **Supersymmetry, Localization and Quantum Entropy Function**  
*June 11, 2010*  
Durham University
- **(Super)Galilean Conformal Algebras**  
*June 16, 2010*  
Imperial College London
- **Supersymmetry, Localization and Quantum Entropy Function**  
*January 13, 2011*  
TIFR, Mumbai
- **Amplitude Mode of the d-Density Wave State and its Relevance to High- $T_c$  Cuprates**  
*November 30, 2012*  
Perimeter Institute, Waterloo  
(Web seminar)
- **Amplitude Mode of the d-Density Wave State and its Relevance to High- $T_c$  Cuprates**  
*January 8, 2013*  
HRI, Allahabad
- **Higher Angular Momentum Pairing from Transverse Gauge Interactions**  
*November 18, 2013*  
IACS, Kolkata

- **Higher Angular Momentum Pairing from Transverse Gauge Interactions**  
*January 24, 2014*  
Perimeter Institute, Waterloo
- **Renormalization Group Analysis of a Non-Fermi Liquid System**  
*July 9, 2014*  
KIAS, Seoul
- **Low Energy Physics of a Non-Fermi Liquid System**  
*July 24, 2014*  
TIFR, Mumbai
- **Low Energy Physics of a Non-Fermi Liquid System**  
*August 1, 2014*  
SINP, Kolkata
- **Low Energy Physics of a Non-Fermi Liquid System**  
*August 13, 2014*  
IISER Kolkata
- **Low Energy Physics of a Non-Fermi Liquid System**  
*August 25, 2014*  
HRI, Allahabad
- **Low Energy Physics of a Non-Fermi Liquid System**  
*September 2, 2014*  
IIT Madras, Chennai
- **Low Energy Physics of a Non-Fermi Liquid System**  
*September 4, 2014*  
ICTS, Bengaluru
- **UV/IR Mixing in non-Fermi liquids**  
*February 20, 2015*  
Progress and Applications of Modern Quantum Field Theory, Aspen
- **UV/IR Mixing in non-Fermi liquids**  
*June 19, 2015*  
Yukawa Institute, Kyoto University
- **UV/IR Mixing in non-Fermi liquids**  
*August 18, 2015*  
University of Iceland
- **UV/IR Mixing in non-Fermi liquids**  
*September 9, 2015*  
University of Oslo, Norway
- **Renormalization Group Analysis of a Non-Fermi Liquid System**  
*May 1, 2014*  
4 Corners Southwest Ontario  
Condensed Matter Physics Symposium,  
Perimeter Institute, Waterloo
- **Low Energy Physics of a Non-Fermi Liquid System**  
*July 23, 2014*  
IIT Bombay, Mumbai
- **Low Energy Physics of a Non-Fermi Liquid System**  
*July 28, 2014*  
IACS, Kolkata
- **Low Energy Physics of a Non-Fermi Liquid System**  
*August 5, 2014*  
IOP, Bhubaneswar
- **Low Energy Physics of a Non-Fermi Liquid System**  
*August 20, 2014*  
IIT Kanpur
- **Low Energy Physics of a Non-Fermi Liquid System**  
*September 1, 2014*  
IMSc, Chennai
- **Low Energy Physics of a Non-Fermi Liquid System**  
*September 3, 2014*  
IISc, Bengaluru
- **Low Energy Physics of a Non-Fermi Liquid System**  
*February 13, 2015*  
University of Arizona, Tucson
- **Low Energy Physics of a Non-Fermi Liquid System**  
*June 12, 2014*  
Okinawa Institute of Science and Technology, Japan
- **Counting Majorana bound states using complex momenta**  
*June 24, 2015*  
RIKEN Center for Emergent Matter Science, Japan
- **UV/IR Mixing in non-Fermi liquids**  
*September 4, 2015*  
Physics of Interfaces and Layered Structures, Nordita, Sweden
- **UV/IR Mixing in non-Fermi liquids**  
*September 22, 2015*  
IIT Kharagpur, India

- **Fun with Phases**  
*September 24, 2015*  
IACS, Kolkata, India
- **UV/IR Mixing in non-Fermi liquids**  
*September 30, 2015*  
IIT Hyderabad, India
- **Fun with Phases**  
*October 8, 2015*  
IMSc, Chennai, India
- **Fun with Phases**  
*October 13, 2015*  
IISc, Bengaluru, India
- **UV/IR Mixing in non-Fermi liquids**  
*October 15, 2015*  
JNCASR, Bengaluru, India
- **Fun with Phases**  
*October 27, 2015*  
PRL, Ahmedabad, India
- **UV/IR Mixing in non-Fermi liquids**  
*October 30, 2015*  
IISER Mohali, India
- **Aspects of Ising-nematic quantum critical point**  
*May 25, 2016*  
UBC, Canada
- **Fun with Phases**  
*August 08, 2016*  
University of Toronto, Canada
- **Aspects of Ising-nematic quantum critical point**  
*August 24, 2016*  
McGill University, Canada
- **Aspects of Ising-nematic quantum critical point**  
*October 07, 2016*  
University of Bern
- **Aspects of Ising-nematic quantum critical point**  
*December 05, 2016*  
Karlsruher Institut für Technologie
- **Manoeuvring Majoranas in 1D systems**  
*April 13, 2017*  
TIFR Hyderabad, India
- **Manoeuvring Majoranas in 1D systems**  
*April 28, 2017*  
University of California Santa Cruz, USA
- **UV/IR Mixing in non-Fermi liquids**  
*September 28, 2015*  
IISER Pune, India
- **UV/IR Mixing in non-Fermi liquids**  
*October 1, 2015*  
TIFR Hyderabad, India
- **UV/IR Mixing in non-Fermi liquids**  
*October 9, 2015*  
CMI, Chennai, India
- **Fun with Phases**  
*October 14, 2015*  
ICTS, Bengaluru, India
- **UV/IR Mixing in non-Fermi liquids**  
*October 16, 2015*  
IIT Gandhinagar, India
- **UV/IR Mixing in non-Fermi liquids**  
*October 28, 2015*  
PRL, Ahmedabad, India
- **UV/IR Mixing in non-Fermi liquids**  
*November 3, 2015*  
IIT Delhi, India
- **Aspects of Ising-nematic quantum critical point**  
*June 01, 2016*  
SFU, Canada
- **Aspects of Ising-nematic quantum critical point**  
*August 23, 2016*  
Université de Montréal, Canada
- **Aspects of Ising-nematic quantum critical point**  
*September 13, 2016*  
University of Basel, Switzerland
- **Aspects of Ising-nematic quantum critical point**  
*November 09, 2016*  
ETH Zurich
- **Aspects of non-Fermi liquids**  
*March 01, 2017*  
IIT KGP, India
- **Aspects of non-Fermi liquids**  
*April 27, 2017*  
University of California Santa Cruz, USA
- **Critical Fermi Surface: UV/IR mixing and Superconducting Instability**  
*May 04, 2017*  
Cornell University, USA

- **Critical Fermi Surface: UV/IR mixing and Superconducting Instability**

*June 09, 2017*  
LMU, Munich

- **Critical Fermi Surface: UV/IR mixing and Superconducting Instability**

*July 10, 2017*  
Institute of Physics,  
Polish Academy of Sciences, Warsaw

- **Critical Fermi Surface: UV/IR mixing and Superconducting Instability**

*June 14, 2017*  
Frei University, Berlin

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## Posters presented

- **Majorana Zero Modes in a Quantum Ising Chain with Longer-ranged Interactions**  
*February 6, 2012*  
Aspen Winter Conference on Condensed Matter Physics, USA: Novel Paradigms for Low-Dimensional Electronic Materials
- **Collective Modes of the d-density Wave State and its Relevance to High-T<sub>c</sub> Cuprates**  
*June 26, 2012*  
The Correlated Electron Systems Gordon Research Conference, USA

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## Referees

1. Prof. Ashoke Sen  
[email: [ashokesen1999@gmail.com](mailto:ashokesen1999@gmail.com) , [sen@hri.res.in](mailto:sen@hri.res.in) ]  
Address: Harish-Chandra Research Institute,  
Jhansi, Chhatnag Road,  
Allahabad - 211019, India  
Phone: +91-532-2274302  
Fax: +91-532-2567748
2. Prof. Sudip Chakravarty  
[email: [sudip@physics.ucla.edu](mailto:sudip@physics.ucla.edu) ]  
Address: 6-137A Knudsen Hall,  
UCLA, Physics & Astronomy,  
475 Portola Plaza, Los Angeles  
CA 90095-1547, USA  
Phone: +1-310-825-4974  
Fax: +1-310-206-0864
3. Prof. Roderich Moessner  
[email: [moessner@pks.mpg.de](mailto:moessner@pks.mpg.de) ]  
Address: Max Planck Institute for the Physics of Complex Systems  
Nöthnitzer Straße 38  
D-01187 Dresden, Germany

Phone: +49 351 871-1103

Fax: +49 351 871-1199

4. Prof. Roger Melko  
[email: [rgmelko@uwaterloo.ca](mailto:rgmelko@uwaterloo.ca) ]  
Room no. 368, Physics Building,  
University of Waterloo,  
200 University Ave. W.,  
Waterloo, ON N2L 3G1, Canada  
Phone: (519) 888-4567 x38406
  
5. Prof. Michael Lawler  
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