CURRICULUM VITAE

Name :	Sandipan Sengupta
Birth :	April 22, 1983
Nationality :	Indian
Sex :	Male
Address :	Inter University Centre for Astronomy and Astrophysics (IUCAA), Ganeshkhind, Pune 411007, Maharashtra, India
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Current position :	Post Doctoral Fellow, IUCAA, Pune, India
Ph.D. advisor:	Prof. Ghanashyam Date
Title of Ph.D. thesis:	Gauge theory of gravity with topological invariants
Field of specialisation :	Classical and quantum gravity, Cosmology
Academic degrees :	B.Sc. (Physics) Presidency College, Calcutta University, India (2004) M.Sc. (Physics) Indian Institute of Technology, Kharagpur, India (2006) Ph.D. (Physics) IMSc, Chennai, India (2012)
Postdoctoral experience :	Raman Research Institute, Bangalore, India (Nov 2011 - Nov 2014); IUCAA, Pune, India (Nov 2014 - Current)

Academic awards, fellowships :

- 'N.R. Sen Young Researcher Award', 2015, awarded by the Indian Association for General Relativity and Gravitation' (IAGRG)
  ("Awarded to a young researcher in recognition of outstanding contributions in Gravitational Physics")

- 'V.V. Narlikar Best Thesis Award', 27th IAGRG Meeting of the 'Indian Association for General Relativity and Gravitation' (IAGRG-27), Garhwal University, Srinagar, India, March 7-9, 2013
  (Awarded by the Indian Association for General Relativity and Gravitation for the "best thesis work done in India during the period 2008-2012")

- UGC-CSIR NET Junior Research Fellowship and Lecturership, 2006
  (Ranked among the top 4 in this All-India exam after the written test for S.P.M. Fellowship following the main exam)

- JEST Junior Research Fellowship, 2006
  (Ranked among the top 25 in this All-India exam)

Teaching experience :

- Project guide, Science Academies' Summer Research Fellowship Programme, Student name- Galla Chetan Krishna, Visiting student at Raman Research Institute, Registration no.- PHYS745, Project Title: 'General Relativity',

- Project guide, Science Academies' Summer Research Fellowship Programme, 2013

- Lecturer, 'Constrained Hamiltonian systems', School on Loop Quantum Gravity, Sept 22-30, 2010, IMSc, Chennai, India

- Teaching assistant, 'Advanced General Relativity' semester course (Instructor: Prof. Ghanashyam Date), IMSc, Chennai, India

Talks at National and International conferences/visits :

- 'N.R. Sen Award Lecture' in IAGRG-2015, RRI, Bangalore, India, 18-20 March, 2015 (Invited talk; To be presented at the upcoming IAGRG meeting)

- 'Torsional instantons in quantum gravity', SINP, Kolkata, India, 2015

- 'Torsional instanton effects in quantum gravity', Field Theoretic Aspects of Gravity-FTAG 2014, IISER Mohali, Chandigarh, India, 8-12 Dec, 2014
  (Invited talk)

- 'Topological parameters in classical and quantum gravity', IISER Kolkata, India, 2014

- 'Reconciling asymptotic flatness with discrete quantum geometry', SINP Kolkata, India, 2014; IACS, Kolkata, 2014

- 'Topological parameters in gravity', KU Leuven, Belgium, 2013;
  Max Planck Institute for Gravitation Physics, Golm, Germany, 2013

- 'Gravity asymptotics with topological parameters', Field Theoretic Aspects of Gravity- FTAG 2013, IIT Gandhinagar, Gujarat, India, 5-8 Sep, 2013
  (Invited talk)

- 'Gauge theory of gravity with topological invariants', 27th IAGRG Meeting of the Indian Association for General Relativity and Gravitation (IAGRG-27), Garhwal University, Srinagar, India, March 7-9, 2013

- 'Hamiltonian theory of gravity with three topological parameters', Saha Institute of Nuclear Physics, Kolkata, 2012

- 'Gauge theory of gravity with topological invariants', IGC, Pennsylvania State University, USA, 2011

- 'Topological parameters in gravity', International Conference in quantum gravity: Loops 11, CSIC, Madrid, Spain, 2011

- 'Quantum realizations of Hilbert-Palatini constraints', Harish Chandra Research Institute, Allahabad, India, 2010

- 'Topological interpretation of Barbero-Immirzi parameter', International Conference in quantum gravity: Loops 09, Beijing Normal University, Beijing, China, 2009

- 'Barbero-Immirzi parameter in gravity theory', 25th Meeting of the Indian Association for General Relativity and Gravitation (IAGRG-25), Saha Institute of Nuclear Physics, Kolkata, India, 2009

National and International Schools and Conferences attended :

- Field Theoretic Aspects of Gravity- FTAG 2014, IISER Mohali, Chandigarh, India, 8-12 Dec, 2014

- Second Erlangen Fall School on Quantum Geometry, University of Erlangen-Nuremberg, Germany, 7-11 Oct, 2013

- Field Theoretic Aspects of Gravity- FTAG 2013, IIT Gandhinagar, Gujarat, India, 5-8 Sep, 2013

- Interface of Numerical Relativity with Gravitational-Wave Astronomy, Neutrino Physics and High-Energy Astrophysics, ICTS Building, IISc Campus, Bangalore, India, 24 June-5 July, 2013,

- US-India Advanced Studies Institute on Thermalization: From Glasses to Black Holes, Indian Institute of Science (IISc), Bangalore, June 10-21, 2013
- 27th IAGRG Meeting of the Indian Association for General Relativity and Gravitation (IAGRG-27), Garhwal University, Srinagar, India, March 7-9, 2013
- Quantum Field Theory 2011, Indian Institute of Science Education and Research, Pune, 23-27 February, 2011
- International Conference in Quantum gravity: Loops 11, CSIC, Madrid, Spain, 2011
- School on Loop Quantum Gravity, IMSc, Chennai, 2010
- BNU International Summer School and conference in Quantum gravity, Loops '09, Beijing Normal University, China, 2009
- 25th IAGRG Meeting of the Indian Association for General Relativity and Gravitation (IAGRG-25), SINP, Kolkata, India, 2009
- Indian Strings Meeting (ISM), Pondicherry, India, 2008
- International Conference on Gravitation and Cosmology (ICGC),
  IUCAA, Pune, India, 2007
- AKR school on cosmology and gravitation, SINP, Kolkata, 2005

International visits:

- KU Leuven, Belgium, Nov 5-10, 2013
- Max Planck Institute for Gravitational Physics, Golm, Germany, Oct 12-16, 2013
- Institute for Quantum Gravity, University of Erlangen-Nuremberg, Germany, Oct 7-11, 2013
- INFN, Pisa, Italy, Oct 3-6, 2013
- Theory Division, CERN, Geneva, Switzerland, Sept 24-Oct 2, 2013
- The Institute for Gravitation and the Cosmos, Pennsylvania State University, August-September, 2011

LIST OF PUBLICATIONS

[**1**] 'A quantum gravitational origin of dark energy',
S. Sengupta, arXiv:1501.00779 (2015)

[**2**] 'Torsional instanton effects in quantum gravity',
Romesh K. Kaul and Sandipan Sengupta, Phys. Rev. **D** 90, 124081 (2014)

[**3**] 'Asymptotic flatness and quantum geometry',
S. Sengupta, Class. Quantum Grav. **31** 085005 (2014)

[**4**] 'Gravity Asymptotics with Topological Parameters',
S. Sengupta, Phys. Rev. **D 88**, 024031 (2013)

[**5**] 'Quantum geometry with a nondegenerate vacuum: a toy model',
S. Sengupta, Phys. Rev. **D 88**, 064016 (2013)

[**6**] 'SU(2) gauge theory of gravity with topological invariants',
S. Sengupta, J. Phys.: Conf. Ser. **360** 012024 (2012)

[**7**] 'Topological parameters in gravity',
R. K. Kaul and S. Sengupta, Phys. Rev. **D 85**, 024026 (2012)

[**8**] 'Quantum realizations of Hilbert-Palatini second-class constraints',
S. Sengupta, Class. Quantum Grav. **27**, 145008 (2010)

[**9**] 'Canonical supergravity with Barbero-Immirzi parameter',
S. Sengupta and R. K. Kaul, Phys. Rev. **D 81**, 024024 (2010)

[**10**] 'Topological interpretation of Barbero-Immirzi parameter' ,
G. Date, R. K. Kaul and S. Sengupta, Phys. Rev. **D 79**, 044008 (2009)

[**11**] 'Effective actions from Loop Quantum Cosmology: correspondence with higher curvature gravity',
G. Date and S. Sengupta, Class. Quant. Grav. **26** : 105002 (2009)