

# CURRICULUM VITAE

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## Kuldeep Kumar

Assistant Professor  
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## Personal details

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**Name:** Kuldeep Kumar  
**Father's name:** Ram Dittu  
**Date of birth:** May 2, 1977  
**Sex:** Male  
**Marital status:** Married  
**Permanent address:** Village and P.O. Badhera, Tehsil Nadaun,  
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## Academic qualifications

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| Examination                  | Year        | Board/University    | % marks |
|------------------------------|-------------|---------------------|---------|
| Matric                       | 1992        | HPBSE, Dharamshala  | 80.3    |
| 10+2                         | 1994        | HPBSE, Dharamshala  | 55.5    |
| B.Sc.                        | 1997        | HPU, Shimla         | 65.4    |
| M.Sc. (Hons. School) Physics | 1999        | PU, Chandigarh      | 64.7    |
| NET-CSIR                     | 2000 (June) |                     |         |
| GATE                         | 2001        |                     |         |
| Ph.D.                        | 2008        | SNBNCBS/JU, Kolkata |         |

### Ph.D. thesis

- **Title:** Aspects of noncommutativity in field theory, strings and membranes
- **Supervisor:** Prof. Rabin Banerjee
- **Place of work:** S.N. Bose National Centre for Basic Sciences, JD Block, Sector III, Salt Lake, Kolkata 700098

## Teaching (courses taught)

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### Undergraduate level

- Quantum Mechanics
- Mathematical Physics

### Postgraduate level

- Classical Mechanics
- Statistical Mechanics
- Mathematical Physics (MP-I, MP-II)
- Relativistic Quantum Mechanics & Quantum Field Theory

## List of publications in refereed journals

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1. **Membrane and noncommutativity**  
Rabin Banerjee, Biswajit Chakraborty and Kuldeep Kumar  
*Nucl. Phys. B* 668 (2003) 179
2. **Noncommutative gauge theories and Lorentz symmetry**  
Rabin Banerjee, Biswajit Chakraborty and Kuldeep Kumar  
*Phys. Rev. D* 70 (2004) 125004
3. **Maps for currents and anomalies in noncommutative gauge theories**  
Rabin Banerjee and Kuldeep Kumar  
*Phys. Rev. D* 71 (2005) 045013
4. **Seiberg–Witten maps and commutator anomalies in noncommutative electrodynamics**  
Rabin Banerjee and Kuldeep Kumar  
*Phys. Rev. D* 72 (2005) 085012
5. **Deformed relativistic and nonrelativistic symmetries on canonical noncommutative spaces**  
Rabin Banerjee and Kuldeep Kumar  
*Phys. Rev. D* 75 (2007) 045008
6. **Reply to “Comment on ‘Noncommutative gauge theories and Lorentz symmetry’”**  
Rabin Banerjee, Biswajit Chakraborty and Kuldeep Kumar  
*Phys. Rev. D* 77 (2008) 048702

7. **Symmetries of Snyder-de Sitter space and relativistic particle dynamics**  
Rabin Banerjee, Kuldeep Kumar and Dibakar Roychowdhury  
*JHEP* 03 (2011) 060
8. **New approach to nonrelativistic ideal magnetohydrodynamics**  
Rabin Banerjee and Kuldeep Kumar  
*Eur. Phys. J. C* 76 (2016) 406

## List of publications in conference proceedings

1. **Deformed symmetries on canonical noncommutative spaces**  
Kuldeep Kumar  
AIP Conf. Proc. 939 (2007) 351

## Conferences, Symposia, Workshops etc. attended

1. **XVI DAE-HEP Symposium**  
29 November – 3 December 2004  
Saha Institute of Nuclear Physics, Kolkata  
Presented a talk titled “Maps for currents and anomalies in noncommutative gauge theories” in parallel sessions
2. **International Conference on Noncommutative Geometry and Quantum Physics**  
4–10 January 2006  
S.N. Bose National Centre for Basic Sciences, Kolkata  
Presented a talk titled “Noncommutative gauge theories and Lorentz symmetry”
3. **International Workshop on Theoretical High-Energy Physics**  
15–20 March 2007  
Department of Physics, Indian Institute of Technology, Roorkee  
Presented a talk titled “Deformed symmetries on canonical noncommutative spaces” in parallel sessions
4. **National Workshop on Noncommutative Quantum Field Theory**  
27 July – 7 August 2009  
Department of Physics, Indian Institute of Technology, Kanpur
5. **Two-day Seminar Programme on Trends in Frontiers of Physics**  
15–16 February 2011  
Department of Physics, Panjab University, Chandigarh