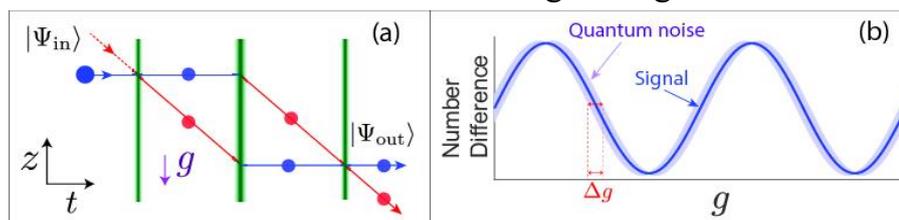




Post-doctoral position in theoretical ultra-cold atomic physics at IISER Bhopal

About: For the AISRF funded project “*Quantum-enhanced atomic gravimetry for improved sensing capabilities*” the groups of **Dr. Sebastian Wüster** and **Dr. Auditya Sharma** at IISER Bhopal are seeking post-doctoral candidates. Please see [<https://www.iiserb.ac.in/results#non-teaching-adv>] (R&D Adv for a post of SRF, department of Physics) for the formal advertisement.

Description: The project will improve techniques for atom interferometry to measure gravity, using squeezing and strongly entangled states, following up on PRL **125**, 100402 (2020) and PRL **115** 040401 (2015). This is an international collaboration between IISER Bhopal, IISER Pune in India and ANU Canberra and UQ Brisbane in Australia, and we hope to organise frequent online exchanges and also at least two major in person visits between the countries. You will keep track of the state of the art in atom interferometry, entanglement usage, model interferometers analytically and numerically and discover new schemes for the use of quantum correlations in gravimetry. You will also be expected to help guiding students in the group and perform some administrative duties such as organising seminars.



Requirements:

Essential: 1. Ph.D. or post-doctoral experience in quantum theory.
2. Experience in numerical work / simulations.
3. Experience in writing published journal papers in English.

Desirable: 4. Experience in ultra cold atomic physics / Bose-Einstein Condensates.
5. Experience in analytical work.
6. Experience with open quantum systems/decoherence.

Details: The salary is Rs. 47000 + 16% HRA. The position will be initially for one year, but can be extended to up to three years, subject to satisfactory performance.

Application: The selection will commence on 5 May 2023, but the call will remain open until a suitable candidate is found.

Please send your application package consisting of (i) coverletter, (ii) CV, (iii) research statement, (iv) contact details of at least two referees and (v) PhD-thesis and papers (if available) directly to [sebastian\[ad\]iiserb.ac.in](mailto:sebastian[ad]iiserb.ac.in). Shortlisted candidates will be asked for an interview and talk in Bhopal or via Skype (we cannot provide TA).