



# Aswath Babu H

Assistant Professor, Depart. of Physics, IIIT Dharwad

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## Research Interests

- Quantum Information Theory
- Quantum Optics and Nonlinear Optics
- Nonlinear Dynamics of Optical Systems

## Experience

Sept. 2016 – Present **Assistant Professor**, IIIT DHARWAD, Hubballi, Karnataka.

March–Sept. 2016 **Assistant Professor**, NIT CALICUT, Calicut, Kerala.

Dec. 2014 – Octo. 2015 **Visiting Post-Doctoral Fellow**, QUANTUM INFORMATION GROUP, ATOMIC PHYSICS DIVISION, LUND UNIVERSITY, Lund, Sweden.

Feb. 2014 – Dec. 2014 **Institute Post-Doctoral Fellow**, QUANTUM INFORMATION GROUP, IIT MADRAS, Chennai, India.

## Education

2013 **PhD Physics**, IIT Kanpur, Kanpur, UP.

2006 **MSc Physics**, Central University of Hyderabad, Hyderabad, CGPA – 8.59.  
Distinction with University Gold Medal

2004 **B.Sc.Ed.**, RIE Mysore, Mysore University, Marks – 72%.  
Integrated course in science and education

## PhD Thesis

Title *Creation and control of nonlinear dynamical phenomena in all-optical bistable systems*

Supervisor Professor Harshwardhan Wanare

Description Atom-field interactions can be enhanced by employing a cavity configuration, wherein the field, over successive round trips, is made to undergo repeated interaction with the atoms. Optical cavity systems undergo different nonlinear dynamical processes to exhibit nonlinear dynamical features. This thesis covers the investigation of such cavities and their associated nonlinear dynamical behavior, ranging from periodic self-pulsing to chaotic behavior in the cavity output field.

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