

## CURRICULUM VITAE



Name : **RAJIB PRADHAN**

Designation : **Assistant Professor in Physics**  
**Midnapore College (Autonomous)**  
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Education Qualification : **M.Sc.**

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Date of Joining : 15.09.2006

➤ **List of research papers published in National/ International journals:**

- (i) K. Hussain, **R. Pradhan**, P. K. Datta: “Patterning characteristics and its alleviation in high bit-rate amplification of bulk semiconductor optical amplifier” in *Opt Quant Electron* **42**, 29 – 43, 2010.
- (ii) P. K. Datta, **R. Pradhan**, L Mishra, S Saha: “Effect of Saturable Index Change on All-Optical Logic Operations in Passive Vertical Cavity Semiconductor Saturable Absorber” in *IET Optoelectron* **5**, 77–82 (2011).
- (iii) **R. Pradhan**, K. Hussain, and P. K. Datta, “Reflective Vertical Cavity Semiconductor Saturable Absorber for Functional Operations with Thermal Limitations and Saturable Index Change,” in *Opt. Commun.* **284**, 3416-3421 (2011).
- (iv) **R. Pradhan**, S. Saha, and P. K. Datta, “Dispersive Bi-stability in a Vertical Microcavity-based Saturable Absorber due to Photo-thermal Effect and Initial Phase-detuning” in *Opt. Commun.* **287**, 203-209 (2013).
- (v) **R. Pradhan**, L Mishra, K. Hussain, S. Saha, and P. K. Datta, “All-Optical 2R Regeneration with Contrast Enhancement in a Reflective Vertical Cavity Quantum-Wells Saturable Absorber” in *J. Opt. Commun. Netw.* **5**, 457-464 (2013).
- (vi) **R. Pradhan**, “All-Optical XNOR/NOT Logic Gates and LATCH based on a Reflective Vertical Cavity Semiconductor Saturable Absorber,” in *Appl. Opt.* **53**, 3807-3813 (2014).

- (vii) Mishra, **R. Pradhan**, and P. K. Datta, "Modeling of Two Wavelength Switching using a Reflective Vertical Cavity Semiconductor Saturable Absorber," in *Opt. Commun.***331**, 267-271 (2014).
- (viii) **R. Pradhan**, S. Saha, and P. K. Datta, "Reflective Vertical Cavity Quantum-Well Saturable Absorber as an All-Optical Nonlinear Phase-Shifting Element," in *J. Opt. Soc. Am. B***31**, 2956-2964 (2014).
- (ix) L. Mishra, **R. Pradhan**, and P. K. Datta, "Modeling of Wavelength Conversion Using Switching Bistability in a Vertical Cavity Semiconductor Saturable Absorber," in *International Journal of Electronics and Electrical Engineering***3**, 396-401 (2015).
- (x) **R. Pradhan**, A. K. Dhara, P. Panchadhyayee, and D. Syam, "Determination of Young's modulus by studying the flexural vibrations of a bar: experimental and theoretical approaches," in *Eur. J. Phys.***37**, 015001(14pp) (2016).
- (xi) **R. Pradhan**, "Impact of signal filling factor for switching in reflective vertical cavity-based fast semiconductor saturable absorbers," in *Journal of Modern Optics***64**, 67-73 (2017).

➤ **Area of Teaching:**

- i) Classical Mechanics
- ii) Nuclear Physics
- iii) Heat and Thermodynamics
- iv) Modern Optics
- v) Statistical Mechanics

➤ **CONFERENCE/SEMINAR/SYMPOSIUM PAPERS:**

- (i) **R. Pradhan**, and P. K. Datta, "Effect of saturable nonlinear index change on all-optical logic operations in vertical cavity semiconductor saturable absorption mirror," in *NLS - 09*, CP-06-18, January 13 - 16, 2010.
- (ii) **R. Pradhan**, K. Hussain, and P. K. Datta, "Optical NAND/NOR operations in reflective vertical cavity laser-diode amplifiers," in *NLS19 - 4.24 (76)*, Dec. 1 - 4, 2010.
- (iii) K. Hussain, S. P. Singh, **R. Pradhan**, and P. K. Datta, "Semiconductor Optical Amplifier based all-optical logic operation at 80 Gb/s," in *NLS19 - 4.25 (77)*, Dec. 1 - 4, 2010.
- (iv) K. Hussain, S. P. Singh, **R. Pradhan**, and P. K. Datta, "Alleviation of patterning NRZ signal regeneration in semiconductor optical amplifier using a tunable bandpass filter," in International conference on *FIBRE OPTICS AND PHOTONICS*, IIT Guahati, page no 369, Dec. 11 - 15, 2010.
- (v) **R. Pradhan**, and P. K. Datta, "Long Wavelength Operation of Vertical Cavity Quantum-wells Saturable Absorber with Thermal Limitations and Saturable Index Change," in National Seminar on *LASER MATERIALS AND ITS APPLICATIONS* organized by Dept. of Physics (UG & PG), Midnapore College, Midnapore, page no. - 12, March 02 - 03, 2012.
- (vi) **R. Pradhan**, and P. K. Datta, "Nonlinear Phase Shift Element using Reflective Vertical Cavity Semiconductor Saturable Absorber and its Applications," in *NLS - 21*, CP-06-18, Feb 06 - 09, 2013.
- (vii) L. Mishra, **R. Pradhan**, and P. K. Datta, "Modeling of Two-Wavelength Switching in an InGaAsP/InP Multiple Quantum-Well Based Asymmetric Fabry-Perot Resonator," in *NLS - 21*, CP-01-51, Feb 06 - 09, 2013.

➤ **Associated with any other Organization:**

- i) Life Member of Indian Association of Physics Teachers (IAPT)
- ii) Life Member of Indian Physics Association (IPA)
- iii) Life Member of Indian Laser Association (ILA)

➤ **Extracurricular Activities:**

- i) Prof. In-Charge for National Graduate Physics Examination (NGPE) at Midnpore College Centre.

