

## Curriculum-Vitae

### **INDRANIL BAYAL**

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#### **Objectives:**

At present, I am engaged in theoretical research works related to the fields as mentioned below. I am looking a new career opportunity which enables me to work in a creative and challenging environment for learning and research where I could constantly learn, successfully teach and deliver solution to problems and fulfill my thirst for knowledge..

#### **A. Personal Details:**

1. Father's Name - Late Surajit Bayal
3. DOB – September 05, 1982
4. Marital Status- Married
5. Sex – Male
6. Nationality - Indian
7. Religion - Hinduism

#### **B. Current Position:**

Assistant Teacher, Gopinathpur High School (H.S), Gopinathpur, Purba Medinipur, WB, India, 721633.

#### **C. Fields of Research Interest (Theoretical):**

Quantum Optics, Guided Wave Optics, Photonics, Opto-Quantum Analogy, Quantum Information & computing.

#### **D. Academic Details:**

1. Continuing **Post Ph.D** research with Prof. Dr. P. Panchadhayee (Associate Professor, P.K.College, Contai, WB, India.), Dr. Bibhas Kr Dutta (Assistant Professor, Sree Chaitanya College, Habra), and Professor P. K. Mahapatra (ITER, Siksha 'O' Anushandhan University, Odisha).
2. Obtained the **Ph.D. (Science) Degree** awarded (on 06.12.2018) by Vidyasagar University for the Thesis entitled as “**Optical Analogue of Quantum Effects in Photonic Structures**”.
3. Qualified for **NET CSIR Fellowship** in 2007
4. Qualified **GATE** - 2005
5. Qualified **JEST** - 2005
6. Qualified **M.Sc. (Physics)** in 2004 from Vidyasagar University with 68.6% (First Class)
7. Qualified **B.Sc. (Physics Honours)** in 2002 from Vidyasagar University with 64.5% (First Class)

8. Qualified Class **10+2 Level** examination in 1999 from W.B.C.H.S.E with 78.8% (First Division)
9. Qualified Class **10 Level** examination in 1997 from W.B.B.S.E with 79.9% (First Division)

## **Publications:**

### **Journals: (A)International Journals:**

1. **I. Bayal**, P. Panchadhyayee, B. K. Dutta and P. K. Mahapatra: *Optical trapping with modified exponential decay in optical waveguides via dressed continuum*, J. Mod. Opt. 59(3), 226-234 (2012)
2. **I. Bayal**, B. K. Dutta, P. Panchadhyayee, and P. K. Mahapatra: *Phase control of absorption, dispersion and gain of weak signal field in erbium doped optical fiber*, J. Opt. (Springer) 41(4), 235-242 (2012)
3. **I. Bayal**, B. K. Dutta, P. Panchadhyayee, and P. K. Mahapatra: *Modulation of spatial propagation dynamics in a three-core linear directional coupler*, Opt. Engg. 52(5), 054003 (2013)
4. **I. Bayal**, B. K. Dutta, P. Panchadhyayee, and P. K. Mahapatra: *Variable-coupling-induced optical trapping in optical waveguides via dressed continuum*, J. Mod. Opt. 60(12), 1006-1014 (2013)
5. **I. Bayal**, B. K. Dutta, P. Panchadhyayee, and P. K. Mahapatra: *Optical analogue of double Fano resonance via dressed twin continua*, J. Opt. Soc. Am. B 30 (12), 3202-3209 (2013)
6. **I. Bayal**, B. K. Dutta, P. Panchadhyayee, and P. K. Mahapatra: *Simulation of coherently controlled population dynamics of a three-level atomic system in a three-waveguide directional coupler: An opto-quantum analogy*, Opt. Commun. 347(C), 50-58 (2015).
7. **I. Bayal**, P. Panchadhyayee, and P. K. Mahapatra: *Optical analogue of Rabi oscillations in optical waveguides via structured continuum*, J. Mod. Opt. 62(17), 1412-1418 (2015).
8. **I. Bayal**, B. K. Dutta, P. Panchadhyayee, and P. K. Mahapatra: *Multiphoton-process-induced coherence effects in a dissipative quantum system*, J. Opt. Soc. Am. B 32 (10), 2178-2189 (2015).
9. P. Panchadhyayee, B. K. Dutta, **I. Bayal**, N. Das and P. K. Mahapatra, *Field induced superposition effects on atom localization via resonance fluorescence spectrum*, Physica Scripta 94, 105104 (2019)
10. B. K. Dutta, P. Panchadhyayee, **I. Bayal**, N. Das and P. K. Mahapatra, *Optical absorption microscopy of localized atoms at microwave domain: two-dimensional localization based on the projection of three-dimensional localization*, Scientific Reports 10: 536 (2020)

**(B) National Journals:**

1. **I. Bayal**, and P. Panchadhyayee: *Coherent propagation dynamics of an adiabatic four-waveguide directional coupler- a generic approach*, Scientific Voyage (ISSN: 2395-5546), 2(1), 29-38 (2021)

**(C) Seminar / Conference Publications:**

1. **I. Bayal**, B. K. Dutta, P. Panchadhyayee, and P. K. Mahapatra: *Phase control of absorption, dispersion and gain of weak signal field in erbium doped optical fiber*, International Conference on Trends in Optics and Photonics (IConTOP), December 7 - 9, 2011.

***Declaration***

I hereby declare that all the information furnished above is correct to the best of my knowledge and belief.

Place: Chandipur

Date: 23.08.2023

Sd/- INDRANIL BAYAL