NAME: Dr Vishnu Priye

Areas of Interest: *Fiber Optic Communication, Microwave Engineering*

Brief Resume:

Dr Vishnu Priye is currently Associate Professor at Electronics & Instrumentation Department, Indian School of Mines, Dhanbad. He worked as Assistant Professor in the same department from March 25, 1999 to June 14, 2006. Before joining ISM Dhanbad, he was Senior Scientist in Technology Mission Project on Fiber Optic Components, Indian Institute of Technology Delhi from May 1996 to March 24, 1999. He was on Japanese Government Scholarship at Electronics and Information Science Department at Kyoto Institute of Technology, Kyoto, Japan from October 1991 to March 1996. He was awarded Doctor of Engineering from that Institute. He worked on Teacher Fellowship under the Faculty Improvement Program of UGC, India at Physics Department, Indian Institute of Technology Delhi from January 1985 to January, 1989 and was awarded Ph D for working in the field of Fiber Optic Communication. Prior to that he worked as a Lecturer in a Constituent College of Magadh University, Bodh Gaya from October 1982.

He was Visiting Scholar at Electronics and Information Science Department at Kyoto Institute of Technology, Kyoto, Japan from June 1, 2001 to August 31, 2001.

He is author of about forty professional papers in International Journals and International Conferences of repute. He has developed and patented software *EDFAsim* for modeling Erbium Doped Fiber Amplifiers. He was Principal Investigator of the R & D Project on development of Broadband Tunable Fiber Source for WDM Application funded (Rs 33.29 Lakhs) by Ministry of Information and Communication Technology, New Delhi. Currently he is Principal Investigator of the Thrust Area Project "Modeling of EDFA for C - Band", Financed by Ministry of Human Resource & Development (Rs 18.00 Lakhs).

Professional Membership

1. Member IEEE, USA
2. Member Institution of Engineers, India

List of Publications of Dr. Vishnu Priye

Book (Adaptive Author) – 01
Software Copyright – 01
International Journals – 20
International Conferences – 26
National Conferences/Symposium – 08
Total – 55

Book

1. J. A. Edminster and **Vishnu Priye** (Adaptive Author), "*Electromagnetics", Special* Indian Edition 2006, Schaum Outline Series, Tata McGraw Hill, India.

Software Copyright

1. **Vishnu Priye,** Deepesh Jain and Priyanath Maji, Software "EDFASIM" copyrighted under Intellectual Property Rights at Copyright Office, Government of India under Registration Number – SW 1545 / 2004.

Important Publications in International IEEE/IEE Journals

1. **Vishnu Priye,** D K Singh and S C Arya, "A novel numerical method to model multichannel erbium doped fiber amplifier", Fiber and Integrated Optics, Taylor and Francis (UK), Vol. 25, No. 5, August 2006.

2. G. R. Chakravarty, **Vishnu Priye**, B.P. Pal, and K. Thyagarajan, "Polariser based on a PbSe clad optical waveguide in the infrared: role of a buffer layer", ***IEE Proceedings-Optoelectronics (UK),*** 1998, 145, pp 223-226***.***

3. **Vishnu Priye**, B. P. Pal, and K. Thyagarajan, "Analysis and design of a novel leaky YIG film guided wave optical isolator", ***IEEE J. Lightwave Technol (USA)***, 1998, 16, pp 246-250.

4. K. Okubo, **Vishnu Priye** and M. Tsutsumi, "A new magnetostatic wave delay line using YIG film", ***IEEE Trans. On Magnetics***, ***(USA)***, 1997, 33, pp 2338-2341.

5. **Vishnu Priye** and M. Tsutsumi, "Observation of short pulses in a cascaded magnetostatic soliton waveguide", ***IEE Electron. Lett., (UK),*** 1995, 31, pp 464-465.

6. M. Tsutsumi and **Vishnu Priye**, "Magnetostatic wave soliton in nonuniformly magnetized YIG films", ***IEEE Trans. on Magnetics, (USA)***, 1996, 52, pp 4171-4173.

7. **Vishnu Priye** and M. Tsutsumi, "Nonreciprocal behavior of a leaky gyrotropic waveguide", ***Electron. Lett., (UK)***, 1993, 29, pp 104-105.

8. B.P. Pal and **Vishnu Priye**, "The effect of an axial dip and ripples in the inner cladding on the leakage loss of LP_{01} mode in depressed inner clad fiber'', ***IEE Proceedings Pt-J, (UK),*** 1990, 137, pp 311-314.

9. B.P. Pal, **Vishnu Priye**, R.K. Varshney and A. Kumar, "Explanation of polarization dependence of differential phase shift in two mode elliptic core strain gauges"***, IEE Electron. Lett., (UK***), 1990, 25, pp 1041-1042.

10. **Vishnu Priye**, Y. Gogia, and B.P. Pal, "A simple technique to estimate spot sizes from far fields of single mode fibers", ***IEE Electron.Lett., (UK),*** 1988, 24, pp 1400-1401.

(LINK –2)

R & D Projects of Dr Vishnu Priye

1. *Presently completed a Rs 33.29 lakhs Project at ISM Dhanbad funded by Ministry of Information & Communication Technology, New Delhi, on "Design of Tunable Broadband ASE Fiber Source and Multiwavelength Fiber Laser for WDM System Applications".*
2. *Presently working on a Rs 18.00 lakhs Project at ISM Dhanbad funded by Ministry of Human Resources & Development, New Delhi, on "Modeling of EDFA for C Band", financed by Ministry of Human Resource & Development*, New Delhi.

(LINK –3)

Courses Offered

I B Tech.

Lecture materials developed for following courses:

- Measurement & Instrumentation – IV B. Tech (Electronics Engineering) VII B. Tech. (Petroleum Engineering)
- Electromagnetic Theory & Propagation – V B. Tech (Electronics Engineering)
- Microwaves & Antenna – VIII B. Tech (Electronics Engineering

(Taught in Year 2001-2002)

- Transducers & Sensors – V B. Tech (Electronics Engineering)*
- Optical Communication – VIII B. Tech (Electronics Engineering) VIII B. Tech. (Computer Science Eng.)
- Optical Networks – VIII B. Tech (Electronics Engineering) VIII B. Tech. (Computer Science Eng)

Postgraduate Courses:

- Optical Networks – M Tech Electronics & Communication Engineering
- Electronics & Instrumentation – M.Phil. Chemistry.
- Instrumentation & Control – M. Tech. Tribology
- Applied Electronics – M. Sc. Tech. Applied Geophysics

PhD Projects currently supervised

PhD Topics

- Simulation and Design of Photonic Devices for Application in Fiber Optic Communication Systems.
- Study and Design of WDM Devices for SONET/SDH Physical Layer and Interfacing with ATM.
- Design and Modeling of Erbium Doped Fiber Amplifiers for WDM & DWDM Fiber Optic Communication System.

II B Tech Projects

Topics for B Tech final year students floated are related to - Optical Amplifiers, Pulse Compression in Nonlinear Waveguide and Transmission Line, Magneto-optic & Electro-optic Modulators, Optical Isolators, Optical Networks, Genetic algorithm and its application to Optical Communication