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Research interests: Fiber optics, Lasers

## **Research Publications:**

### ***Book Chapter***

- ***Aditi Ghosh***, Deepa Venkitesh, and R. Vijaya, “Erbium-doped fiber lasers” in Guided wave optics and photonic devices (Ed. Dr. S. K. Bhadra and Prof. A. K. Ghatak), Taylor and Francis group, New Delhi (2013)

### ***Journals***

- Atasi Pal, Anirban Dhar, ***Aditi Ghosh***, Ranjan Sen, Babita Hooda, Vipul Rastogi, Martin Ams, Matthias Fabian, Tong Sun and Kenneth Grattan, “Sensors for harsh environment: Radiation resistant FBG sensor system,” J. Lightwave Technol. 35, 3393-3398 (2016)
- Debasis Pal, ***Aditi Ghosh***, Ranjan Sen and Atasi Pal, “Continuous-wave and quasi-continuous wave thulium-doped all-fiber laser: implementation on kidney-stone fragmentations,” Appl. Opt. 55, 6151-6155 (2016).
- ***Aditi Ghosh***, Arpita Sinha Roy, Sourav Das Chowdhury, Ranjan Sen and Atasi Pal, “All-fiber tunable ring laser source near 2  $\mu\text{m}$  designed for CO<sub>2</sub> sensing,” Sensors & Actuators B: Chemical 235, 547-553 (2016)
- ***Aditi Ghosh*** and R.Vijaya “Linear and nonlinear resonance features of an erbium-doped fiber ring laser under cavity-loss modulation” Pramana – J.Phys. 83, 147-159 (2014)
- ***Aditi Ghosh*** and R.Vijaya “Continuous wave broadband generation using specialty fibers in fiber laser cavity” Appl. Opt. 50, E76-E79 (2011)
- ***Aditi Ghosh***, B.K.Goswami, and R.Vijaya, “Nonlinear resonance phenomena of a doped fiber laser under cavity-loss modulation: experimental demonstrations,” Pramana – J.Phys. 75, 915-921 (2010)
- ***Aditi Ghosh***, Deepa Venkitesh, and R.Vijaya, “Stability studies on Continuous-wave broadband generated in an erbium-doped fiber ring laser using highly nonlinear fiber,” IEEE Photonics Journal 2 (5), 703-711 (2010)
- ***Aditi Ghosh***, Deepa Venkitesh, and R.Vijaya, “Study of Brillouin amplifier characteristics toward optimized conditions for slow light generation,” Appl. Opt. 48, G48-G52 (2009)

- Deepa Venkitesh, **Aditi Ghosh**, and R. Vijaya, “Broadband output from an actively mode-locked fiber ring laser,” *Appl. Opt.* 48, G28-G32 (2009)
- A. Singha, **A. Ghosh**, A. Roy, and N. R. Ray, “Quantitative analysis of hydrogenated diamond like carbon films by visible Raman spectroscopy,” *J. Appl. Phys.* 100, 044910 (2006)

### ***Bulletin and Articles***

- Ranjan Sen, Maitreyee Saha, Sourav Das Chowdhury, Nishant Kumar Shekhar, Debasis Pal, **Aditi Ghosh**, Anirban Dhar, Atasi Pal, and Mrinmay Pal, “High power fiber lasers: Fundamentals to Applications,” *Science and Culture* 81, 319-326 (2015)
- Ranjan Sen, Mrinmay Pal, Atasi Pal, Anirban Dhar, Maitreyee Saha, Sourav Das Chowdhury, Nishant Kumar Shekhar, Debasis Pal and **Aditi Ghosh**, “Fiber Laser Technology – Current Status and Activities by CSIR-CGCRl,” published in *Kiran* (a bulletin of the Indian Laser Association) 25, 27-31 (2014)

### ***Conference Publications***

- **Aditi Ghosh**, Sourav Das Chowdhury, Ranjan Sen and Atasi Pal, “All-fiber tunable ring laser near 2 micron,” in *Proceedings of Photonics-2014: 12<sup>th</sup> International Conference on Fiber optics & Photonics* (IIT Kharagpur, Kharagpur 2014)
- **Aditi Ghosh**, Debasis Pal, Ranjan Sen and Atasi Pal, “Fiber laser at 2  $\mu\text{m}$  for soft tissue surgery,” *Proc. SPIE* 9266, High-Power Lasers and Applications VII, 92660E (2014)
- **A. Ghosh**, R. Sen and A. Pal, “All-fiber thulium-doped fiber ring laser with in-band pumping,” in *IEEE proceedings of Workshop on Recent Advances in Photonics (WRAP-2013)*, IIT Delhi, Delhi
- **Aditi Ghosh** and R. Vijaya, “Four-wave mixing in a combination of low-dispersion fibers towards spectral broadening,” in *Proceedings of Photonics-2012: International Conference on Fiber optics & Photonics* (IIT Madras, Chennai 2012)
- **Aditi Ghosh**, Deepa Venkitesh and R. Vijaya, “Continuous wave broadband generation in fiber laser,” in *Proceedings of International Conference on Optics and Photonics (ICOP 2009)*, CSIO, Chandigarh, India

### **Presentations in Workshops and conferences:**

- National Laser Symposium (NLS-25), KIIT University, Bhubaneswar, Dec. 20-23, 2016, “Design and development of an experimental testbed for the study of thermal mode instability in high-power fiber lasers” by **Aditi Ghosh**, Yusuf Panbiharwala, Thejna R. Joseph, Deepa Venkitesh, Anil Prabhakar, and Balaji Srinivasan (Poster presentation)
- International conference on Fiber optics and Photonics (PHOTONICS 2014), IIT Kharagpur, Kharagpur, Dec. 13-16, 2014, “All-fiber tunable ring laser near 2 micron” by **Aditi Ghosh**, Sourav Das Chowdhury, Ranjan Sen and Atasi Pal (Oral presentation)

- Workshop on Recent Advances in Photonics (WRAP-2013), IIT Delhi, Delhi, Dec. 17-18, 2013, “All-fiber thulium-doped fiber ring laser with in-band pumping,” by *A. Ghosh*, R. Sen and A. Pal (Poster presentation)
- International conference on Fiber optics and Photonics (PHOTONICS 2012), IIT Madras, Chennai, Dec. 9-12, 2012, “Four-wave mixing in a combination of low-dispersion fibers towards spectral broadening” by *Aditi Ghosh* and R.Vijaya (Oral presentation)
- 19<sup>th</sup> IEEE Workshop on Nonlinear Dynamics of Electronic systems (NDES), Kolkata, Mar. 9-11, 2011, “Nonlinear dynamics of fiber ring laser under cavity loss modulation” by *Aditi Ghosh* and R.Vijaya (Poster presentation)
- National conference on nonlinear systems and dynamics (NCNSD), Tiruchirapalli, Jan. 27-30, 2011, “Dynamical studies of an erbium-doped fiber ring laser under loss modulation” by *A.Ghosh* and R.Vijaya (Oral presentation)
- International conference on Fiber optics and Photonics (PHOTONICS 2010), Guwahati, Dec. 11-15, 2010, “Investigation of stability of continuous wave broadband output from a fiber laser” by *Aditi Ghosh*, Deepa Venkitesh and R.Vijaya (Poster presentation)
- International conference on Fiber optics and Photonics (PHOTONICS 2010), Guwahati, Dec. 11-15, 2010, “Continuous wave broadband generation using specialty fibers in fiber laser cavity” *Aditi Ghosh* and R.Vijaya (Poster presentation)
- International conference on Fiber optics and Photonics (PHOTONICS 2010), Guwahati, Dec. 11-15, 2010, “Experimental study of the dynamics of fiber ring laser under cavity-loss modulation” by *Aditi Ghosh* and R.Vijaya (Poster presentation)
- National Laser Symposium, Indore, Dec. 1-4, 2010, “Experimental study of linear and nonlinear resonance features of fiber ring laser under cavity loss modulation” by *Aditi Ghosh* and R.Vijaya (Poster presentation)
- National Laser Symposium (NLS-2009), Mumbai, Jan 13-16, 2010, “Experimental analysis of nonlinear resonance phenomena of a doped fiber laser under cavity-loss modulation” by *Aditi Ghosh*, B.K.Goswami and R.Vijaya (Poster presentation)
- International Conference on Optics and Photonics (ICOP), Chandigarh, Oct.30-Nov.1, 2009, “Continuous wave broadband generation in fiber laser” by *Aditi Ghosh*, Deepa Venkitesh and R.Vijaya (Oral presentation)
- National Laser Symposium (NLS-2008), New Delhi, Jan 7-10, 2009, “Actively mode-locked erbium-doped fiber laser at 10 GHz” by *Aditi Ghosh*, Viswas Nair, Deepa Venkitesh and R.Vijaya (Poster Presentation)
- International conference on Fiber optics and Photonics (PHOTONICS 2008), New Delhi, Dec. 14-17, 2008, “Study of Brillouin amplifier characteristics towards optimized conditions for slow light generation” by *Aditi Ghosh*, Deepa Venkitesh and R.Vijaya, Abstract p.no.188 (Oral presentation)
- International conference on Fiber optics and Photonics (PHOTONICS 2008), New Delhi, Dec. 14-17, 2008, “Broadband output from an actively mode-locked fiber ring laser” by Deepa Venkitesh, *Aditi Ghosh* and R.Vijaya, Abstract p.no.280 (Poster presentation)
- Workshop on Physics and Technology of all-optical communication components and devices, Kharagpur, 11-16 Oct 2007, “Brillouin gain and threshold measurements in single-mode optical fibers” by *Aditi Ghosh* and R. Vijaya (Oral Presentation)
- International conference on MEMS and semiconductor nanotechnology, IIT Kharagpur, Dec. 20-22, 2005, “Understanding diamond-like-carbon films using visible Raman measurements,” by *A. Ghosh*, S. Ghosh, N. R. Ray, and Anushree Roy (Oral Presentation)