

Dr. G.Thavasi Raja

Assistant Professor

Electronics and Communication Engineering

National Institute of Technology (NIT), Tiruchirappalli

Tiruchirappalli-620 015

Book Chapter Publications:

Book Chapter: R. Rajasekar, G. Thavasi Raja, and S. Robinson, "Photonic Crystal-Based Sensors for Biosensing Applications," Chapter 10, Advances in Photonic Crystals and Devices, CRC Press, Sep. 2019.

Journal Publications:

1. **G. Thavasi Raja** and S. K. Varshney, "Large mode area modified clad leakage channel fibers with low bending and higher differential losses," IOP-Journal of Optics, Volume.16, Issue 1, **January 2014**, Pages 015403.
2. **G Thavasi Raja**, SK Varshney, "Extremely Large Mode-Area Bent Hybrid Leakage Channel Fibers for Lasing Applications," IEEE Journal of Selected Topics Quantum Electronics, Volume.20, Issue 17, **October 2014**, Pages.251-259.
3. **G. Thavasi Raja** and S. K. Varshney, "Modified and double-clad large mode-area leakage channel fibers for extreme temperature conditions," IOP-Journal of Optics, Volume.17, Issue 3, **March 2015**, Pages 035706.
4. **G. Thavasi Raja**, Raktim Haldar, and S. K. Varshney, "Numerical analysis of lasing characteristics in highly bend-compensated large mode-area ytterbium-doped double-clad leakage-channel fibers," OSA- Applied Optics, Volume. 54, Issue 35, **December 2015**, Pages.10314–10320.
5. N. Ayyanar, **G. Thavasi Raja**, M. Sharma, and D. Sriram Kumar, "Photonic Crystal Fiber-Based Refractive Index Sensor for Early Detection of Cancer," IEEE Sensors Journal, Volume. 18, Issue 17, Pages. 7093-7099, **September 2018**.
6. N. Ayyanar, A.E. Khalil, M.F.O. Hameed, **G. Thavasi Raja**, S. Salah A Obayya, "Enhanced sensitivity of hemoglobin sensor using dual-core photonic crystal fiber," Optical and Quantum Electronics Springer, Volume.50, Issue 453, **November 2018**, Pages. 1-5.

7. N. Ayyanar, P.G. Kupsusamy, **G. Thavasi Raja**, D. Vigneswaran, and A. H. Aly, "Tricore Photonic Crystal Fiber Based Refractive Index Sensor for Glucose Detection," *IET Optoelectronics*, Volume 13, Issue 3, **December 2018**, Pages 118-123.
8. B.M. Kurade, N. Ayyanar, **G. Thavasi Raja**, and S.K. Varshney, "Asymmetric-clad Multi Trench Fibers with Large Mode-Area and Controlled Leakage Loss," *Elsevier Optical Fiber Technology*, Volume. 48, **March 2019**, Pages 235-241.
9. C. Gunasekaran, B.S. Kumar, N. Ayyanar, **G. Thavasi Raja**, R Mohan, "Surface plasmon-based photonic crystal fibers for high-bandwidth filter realization," *Journal of the Optical Society of America B*, Volume.36, Issue 6, **June 2019**, Pages 1574-1580,
10. K.R. Kishore, S. Utkarsh, N. Ayyanar, G. Thavasi Raja, MS Sanathanan, "Hybrid Plasmonic Label-free Multi-analyte Refractive Index Sensor," *Springer Optoelectronics Letters*, Volume.15, Issue 14, **July 2019**, Pages 269-272.
11. R Rajasekar, **G Thavasi Raja**, K.J Jayson, S Robinson, "High Speed Nano-Optical Encoder Using Photonic Crystal Ring Resonator" *Photonic Network Communications*, **Springer**, Volume 40, **August 2020**, Pages 31–39
12. R Rajasekar, **G Thavasi Raja**, S Robinson, "Numerical Investigation of Reconfigurable Photonic Crystal Switch Based on Phase Change Nanomaterial," *IEEE Transactions on Nanotechnology*, Volume 19, **August 2020**, Pages 545–552.