

## **BOOKS & BOOK CHAPTERS**

- 1 D.Shanmuga Sundar, **A.Sivanantha Raja**, C.Sanjeeviraja and D.Jeyakumar (2015), "Synthesis and characterization of novel siloxane based transparent and flexible substrate for OLEDs", Nanoelectronics and Sensors, ISBN: 978-93-85436-94-9, Bloomsbury Publication.
- 2 D.Shanmuga Sundar, V.Nidhya Vijay, T.Sridarshini and **A.Sivanantha Raja** (2018), "Performance analysis of multichannel EDM hybrid Optical communication system for long haul communications", Frontier Research and Innovation in Optoelectronics Technology and Industry, ISBN: 978-1-138-33178-5, CRC Press, Taylor & Francis.
- 3 D.Shanmuga Sundar, **A.Sivanantha Raja**, R.Saravanan and Marcos Flores Carrasco (2018), "Photocatalyst for indoor air pollution: a brief review" Green Photocatalysts for Energy and Environmental Process, Springer, doi: 10.1007/978-3-030-17638-9, ISBN: 978-3-030-17638-9..
- 4 D.Shanmuga Sundar, T.Sridarshini, R.Sitharthan, Madurakavi Karthikeyan, **A.Sivanantha Raja** and Marcos Flores Carrasco (2019), "Performance investigation of 16/32- channel DWDM PON and long-reach PON systems using an ASE noise source", Advances in Optoelectronic Technology and Industry Development – Jose & Ferreira (eds.), ISBN: 978-0-367-24634-1, CRC Press, Taylor & Francis, London, pp. 93-99.
- 5 D.Shanmuga Sundar, T. Arun, M. Muneeswaran, R.Sitharthan, M. Karthikeyan, A.Sivanantha Raja, and Marcos Flores C (2020), "Conductive oxides role in Flexible Electronic Device Applications", Metal and Metal Oxides for Energy and Electronics, Springer Nature, ISBN: 978-3-030-53065-5, pp.121-148, doi: 10.1007/978-3-030-53065-5\_4.
- 6 Jayson Keerthy Jayabarathan, **A. Sivanantha Raja** and S. Robinson, "QoS Enhancement in MANET", Cloud and IoT based Vehicular Ad-Hoc Networks, Scrivener, Wiley Publisher, pp. 325-348, 2021, ISBN: 1119761832, 9781119761839.

## **SCIENCE CITATION INDEX JOURNAL**

- 1 **Sivanantha Raja A.** and Sankaranarayanan K. (2007), 'Precise measurement of concentration of blood glucose from the tristimulus values obtained from the color of the assay in the course of clinical diagnosis', IETE Journal of Research, Vol. 53, No. 5, pp. 485-494.
- 2 Shanmuga Sundar D and **Sivanantha Raja A** (2012): "High efficient plastic substrate polymer white Light Emitting Diode", Optical and Quantum Electronics, Springer, Vol.38, No.4/6.
- 3 Selvendran S, **Sivanantha Raja A**, Kalaiselvi K and Esakkimuthu K (2012): "Simultaneous four channel wavelength conversion of 50Gbps CSRZ-DPSK signals in S and C bands using HNLF without additional pump signals", Optical and Quantum Electronics, Springer, Vol.38, No.4/6.
- 4 Selvendran S and **Sivanantha Raja A** (2013): "Analysis of four wave mixing under different all optical modulation formats", Journal of Nonlinear optical Physics and Materials, Vol.22, No.3, 1350034 (20 pages).
- 5 Mercy Kingsta R and **Sivanantha Raja A** (2013): "Numerical Design and Analysis of multimode fiber with high bend tolerance and bandwidth using refractive index

- optimization", Optical Fiber Technology, Elsevier, Vol. 19, pp. 587-592.
- 6     **A.Sivanantha Raja**, S. Selvendran, R. Priya, C. Mahendran (2014): "An optimized design for non-zero dispersion shifted fiber with reduced nonlinear effects for future optical networks", Optica Applicata, Vol.44(4), pp. 503-519.
- 7     V.R.S. Rajeshkumar and **A.Sivanantha Raja** (2015), "A novel VLSI implementation of lossless ECG data compression technique using intelligent slope predictor and modified Huffman coding", Optoelectronics and Advanced materials – Rapid communications, Vol. 9 No. 5-6, pp.873-879.
- 8     C. Jenila , **A.Sivanantha Raja**: :Reduction of data acquisition time in Raman spectroscopy imaging using structure based compressive sampling algorithm", Optical and Quantum Electronics, Springer, Online publication dated 08 Sep 2015.
- 9     G. Rajalakshmi, **A.Sivanantha Raja**, D. Shanmuga Sundar (2015): "Design and optimization of two dimensional photonic crystal based optical filter", Journal of Nonlinear Optical Physics & Materials, Vol. 24, No. 3 (2015) 1550027 (1-8).
- 10    S.Geerthana, **A.Sivanantha Raja**, D. Shanmuga Sundar: "Design and optimization of photonic crystal fiber with improved optical characteristics", Journal of nonlinear optical Physics and materials, Vol. 24, No. 4, 2015 (11 pages).
- 11    R.Priya, **A.Sivanantharaja**, Selvendran.S (2015) "Performance analysis of optimized NZDSF without amplification and without dispersion compensation for WDM optical networks" Optica Applicata, vol 45 , No. 4, pp.473-490.
- 12    V.R.S. Rajeshkumar and **A.Sivanantha Raja** (2015), "ECG beat classification by radial basis function neural networks classifier based on PSO, GSA and Hybrid PSOGSA techniques", Journal of Pure and Applied Microbiology, Vol.9, pp. 681-689.
- 13    D. Venugopal, **A. Sivanantha Raja** (2015): "Improvement of Public Healthcare System through Band Effective Storage and Transmission of Color Medical Images", Journal of Pure and Applied Microbiology, Vol. 9, pp. 201-207.
- 14    D. Venugopal, S. Mohan, **A.Sivanantha Raja** (2016): "An efficient block based lossless compression of medical images", Optik, Vol. 127, pp. 754-758
- 15    **A. Sivanantha Raja**, S. Vigneshwari, S. Selvendran: "A novel high gain and wide band hybrid amplifier designed with a combination of EDYFA and discrete Raman amplifier", Journal of Optical Technology, Vol. 83, No. 4, 2016 (11 pages).
- 16    D Shanmuga Sundar, **A Sivanantha Raja**, C Sanjeeviraja, D Jeyakumar: "Highly transparent flexible polydimethylsiloxane films - a promising candidate for optoelectronic devices", Polymer International, 2016 (9 pages) DOI 10.1002/pi.5088.
- 17    S Selvendran, **A Sivanantha Raja**: "Analysis on the impact of parabolic index profile of the core of a high nonlinear fiber", Journal of Optical Technology, Vol. 83, No. 6, 2016
- 18    R Sathyadevaki, **A. Sivanantha Raja**, D Shanmuga Sundar (2016) "Photonic crystal based optical filter: a brief investigation", Photonic network communication, Springer, DOI: 10.1007/s11107-016-0620-9.
- 19    S Ygalakshmi, S Selvendran, **A Sivanantha Raja**: "Design and analysis of a photonic crystal fiber based polarization filter using surface plasmon resonance", Laser Physics 26 (2016) 056201 (7pp).
20. Jayson K. Jayabarathan, **Sivanantha Raja Avaninathan**, Robinson Savarimuthu (2016): "QoS enhancement in MANETs using priority aware mechanisms in DSR protocol", EURASIP Journal on Wireless Communications and Networking, DOI: 10.1186/s13638-016-0629-x, 2016:131
21. S. Selvendran, **A. Sivanantha Raja** (2016): "New refractive index profiles of dispersion-flattened highly nonlinear fibers for future all-optical signal processing in wdm optical networks", Photonic network communications, DOI: 10.1007/s11107-016-0635-2

- 22 K.Rohini Priya, **A.Sivanantha Raja** and D.Shanmuga Sundar (2016), "Design of dual core liquid filled photonic crystal fiber coupler and analysis of its optical characteristics" *Journal of Optical Technology, Optical Society of America*, doi.org/10.1364/JOT.83.000569, Vol.83, No.9, pp. 569-573.
- 23 R.Sathyadevaki, D.Shanmuga Sundar and **A.Sivanantha Raja** (2016), "Design of dual ring wavelength filters for WDM applications", *Optics Communication, Elsevier*, doi: 10.1016/j.optcom.2016.06.045, Vol.380, Issue 1, pp 409–418.
- 24 R.Yamunadevi, D.Shanmuga Sundar, **A.Sivanantha Raja** (2016), "Characteristics Analysis of Metamaterial based Optical Fiber" *Optik - International Journal for Light and Electron Optics, Elsevier*, doi: 10.1016/j.ijleo.2016.07.014, Vol. 127, Issue 20, pp. 9377–9385.
- 25 P. Maheswaravenkatesh, **A.Sivanantha Raja** (2016): " A QoS-Aware Dynamic Bandwidth Allocation in PON Networks", *Photonic network communication*, DOI: 10.1007/s11277-016-3565-5
- 26 S.Selvendran, **A.Sivanantha Raja** (2016): "Performance analysis of a highly nonlinear optical fiber with different graded refractive index profiles", *Optical and Quantum Electronics*, DOI: 10.1007/s11082-016-0788-3.
- 27 K. Esakki Muthu, **A.Sivanantha Raja**. (2016): "Bidirectional MM-Wave Radio Over Fiber transmission through frequency dual 16-tupling of RF local oscillator", *Journal of European Optical Society – Rapid publications*, Vol. 12:24.
- 28 K. Esakki Muthu, **A. Sivanantha Raja** (2016): "Improved filterless 12-tupled optical MM-wave generation and 2.5 Gb/s RoF transmission", *Optoelectronics and Advanced materials – Rapid communications*, Vol.10, No.11-12, p.869-872.
- 29 Selvendran.S, **A.Sivanantha Raja**, S. Arivazhagan, M.Kannan, (2016) "Effect of Alpha and Gaussian Refractive Index Profile on the Design of Highly Nonlinear Optical Fiber for an Efficient Nonlinear Optical Signal Processing" *Journal of Quantum electronics, Imprint: IOP science. Volume 46, No 9*, pp 829–838.
- 30 C.Umamaheswari, D.Shanmuga Sundar and **A.Sivanantha Raja** (2017), "Exploration of Photonic Crystal Circulator Based on Gyromagnetic Properties and Scaling of Ferrite Materials", *Optics Communication, Elsevier*, doi: 10.1016/j.optcom.2016.07.065, Vol.382, Issue 1, pp 186–195.
- 31 R.Yamunadevi, D.Shanmuga Sundar, **A.Sivanantha Raja** (2017), "AMM Cladding fiber for coupled plasmonic propagation and core guidance" *Photonic Network Communications, Springer*, doi: 10.1007/s11107-016-0653-0, Vol.33, Issue 3, pp 371-376.
- 32 Esakki Muthu K, **Sivanantha Raja A** and Shanmugapriya G (2017), "Frequency16-tupled optical millimeter wave generation using dual cascaded MZMs and 2.5 Gbps RoF transmission", *Optik*, DOI : 10.1016/j.ijleo.2017.04.074
- 33 Jayson Keerthy Jayabarathan, **A. Sivanantharaja** and S. Robinson (2017), "Quality of Service Enhancement of Mobile Adhoc Networks Using Priority Aware Mechanism in AODV Protocol", *Wireless Pers Commun*, DOI 10.1007/s11277-017-4453-3.
- 34 K. Esakki Muthu, **A.Sivanantha Raja**, S. Selvendran (2017): "Optical generation of millimetre waves through frequency decoupling using DO-MZM with RoF transmission", *Optical and Quantum Electronics*, Springer, Vol. 49:63.
- 35 D.Rajeswari, **Sivanantha Raja A** and Selvendran S, (2017), "Design and analysis of polarisation splitter based on dual-core photonic crystal fibre",*International Journal for Light and Electron Optics (Optik)*, DOI: 10.1016/ij.ijleo.2017.06.067.
- 36 Sivaprakash S.C., **Sivanantha Raja A** and Pavithra M (2017): "A meander coupled line wide band power divider with open stub and DGS for Mobile application", *Turkish journal of Electrical Engineering and Computer Sciences*, (2017) 25: 3627 - 3644.

- 37 T. Dhandayuthapani, R. Sivakumar, R. Ilangovan, C. Gopalakrishnan, C. Sanjeeviraja, **A. Sivanantha Raja** (2017): "High coloration efficiency, high reversibility and fast switching response of nebulised spray deposited anatase TiO<sub>2</sub> thin films for electrochromic applications", *Electrochimica Acta*, 255 (2017) 358 - 368.
- 38 S Selvendran, **A Sivanantha Raja**, S Yogalakshmi (2017): "A Highly Sensitive Surface Plasmon Resonance Biosensor using Photonic Crystal Fiber filled with Gold Nano wire encircled by Silicon Lining", *Optik - International Journal for Light and Electron optics*, DOI: [10.1016/j.jleo.2017.10.157](https://doi.org/10.1016/j.jleo.2017.10.157)
- 39 J. Divya, S. Selvendran, **A. Sivanantha Raja** (2017): "Two dimensional photonic crystal ring resonator based channel drop filter for CWDM application", *Photonic network communications*, DOI: 10.1007/s11107-017-0749-1.
- 40 R.Sathyadevaki, D.Shanmuga Sundar and **A.Sivanantha Raja** (2017), "Photonic Crystal 4X4 dynamic hitless routers for Integrated Photonic NoCs", Springer, *Photonic Network Communications*, 36, 82-95, doi: 10.1007/s11107-018-0758-8.
- 41 K. Esakki Muthu, **A.Sivanantha Raja**. (2018): "Millimeter wave generation through frequency 12-tupling using DP-polarization modulators", *Optical and Quantum Electronics*, Springer.Opt Quant Electron (2018) 50:227, doi.org/10.1007/s11082-018-1488-y.
- 42 S Selvendran, **A Sivanantha Raja**, S Yogalakshmi (2018): "A highly sensitive Bezier polygonal hollow core photonic crystal fiber biosensor based on surface plasmon resonance", *Optik - International Journal for Light and Electron optics*, 171, (2018) 109-113 doi.org/10.1016/j.jleo.2018.06.039.
- 43 J Divya, S Selvendran and **A Sivanantha Raja**, (2018): "Photonic crystal based optical bio-sensor: a brief investigation", *Laser Physics*, IOP Publishing, 28 (2018) 066206, <https://doi.org/10.1088/1555-6611/aab7d2>.
- 44 R. Kalidoss, **A Sivanantha Raja**, D.Jeyakumar and N.Prabhu (2018): "Solid state planar surface electrode with ion selective electrodes for clinical diagnosis", *IEEE sensors journal*, DOI: 10.1109/FJSEN.2018.2865726.
- 45 D. Shanmuga Sundar, R. Sathyadevaki and **A Sivanantha Raja**, (2018): "High efficient filters for Photonic Integrated Networks: a brief analysis", *Laser Physics*, IOP Publishing, 28, 116203, <https://doi.org/10.1088/1555-6611/aadf27>.
- 46 D. Shanmuga Sundar, R. Sathyadevaki, T.Sridarshini and **A Sivanantha Raja**, (2018), "Photonic crystal based routers for Photonic integrated on chip networks: a brief analysis, *Optical and Quantum Electronics* 50:383.
- 47 S. Selvendran, **A Sivanantha Raja**, K. Esakki Muthu (2019), "A study on the effect of dispersion flattened characteristics of highly nonlinear fiber in fiber optic parametric amplification", *Optik- International journal for Light and Electron Optics*, <https://doi.org/10.1016/j.jleo.2019.02.063>.
- 48 R. Sarojini, S. Selvendran, **A Sivanantha Raja**, K. Esakki Muthu (2019), "Cross polarisation modulation based wavelength conversion with very low pump power in SOA", *Optik- International journal for Light and Electron Optics*, 185 (2019) 852-858.
- 49 D.Shanmuga Sundar, C.Umamaheswari, T.Sridarshini, M.Karthikeyan, R.Sitharthan, **A.Sivanantha Raja**, and Marcos Flores C, (2019), "Compact Four Port Circulator based on 2D Photonic Crystals with 90° Rotation of Light Wave for Photonic Integrated Circuits Applications", *Laser Physics*, IOP Publishing, 29, 066201, doi: 10.1088/1555-6611/ab1413.
- 50 S. Selvendran, **A. Sivanantha Raja**, K. Esakki Muthu, A. Lakshmi (2019): "Certain investigation on visible light communication with OFDM modulated white LED using Optisystem simulation", *Wireless Personal Communications*, DOI: 10.1007/s11277-019-06617-2.

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- 51 S. Selvendran, A. Susheel, P.V.Tarun, K. Esakki Muthu, **A.Sivanantha Raja** (2020), "A novel surface plasmon based photonic crystal fiber sensor", Optical and Quantum Electronics (2020) 52:290 <https://doi.org/10.1007/s11082-020-02403-8>.
- 52 K. Esakki Muthu, S. Selvendran, V. Keerthana, K. Murugalakshmi, **A. Sivanantha Raja**: "Design and analysis of a reconfigurable XOR/OR logic gate using 2D photonic crystals with low latency", Optical and Quantum Electronics, (2020) 52:433, 9 pages.
- 53 R.Sivaranjani, D. Shanmuga Sundar, T. Sridarshini, R. Sitharthan, M. Karthikeyan, **A. Sivanantha Raja**, and Marcos Flores C, (2020), "Photonic Crystal Based All-Optical Half Adder: a brief analysis", Laser Physics, IOP Publishing, 30, 116205 (8pp), [10.1088/1555-6611/abbe8b](https://doi.org/10.1088/1555-6611/abbe8b).
- 54 D.Shanmuga Sundar, Sharath Sriram, Sumeet Walia, **A. Sivanantha Raja**, Marcos Flores C, and Madhu Bhaskaran, (2020), "Wearable Label Free Optical BiodeTECTors: Progress and Perspectives", Advanced Photonics Research, Wiley, doi: [10.1002/adpr.202000076](https://doi.org/10.1002/adpr.202000076).
- 55 M. Madhumitha, S. Selvendran, **A. Sivanantha Raja** and K. Esakki Muthu (2020), "Photonic Crystal based Narrowband Optical Filter: A Brief Analysis", Optik - International Journal for Light and Electron optics, doi.org/ [10.1016/j.ijleo.2020.166162](https://doi.org/10.1016/j.ijleo.2020.166162).
- 56 X. Alishacelestin, **A. Sivanantha Raja**, K. Esakki Muthu & S. Selvendran (2021), "A Novel Ultra-high Birefringent Photonic Crystal Fiber for Nonlinear Applications", Brazilian Journal of Physics. <https://doi.org/10.1007/s13538-020-00853-9>.
- 57 X. Alishacelestin, **A. Sivanantha Raja**, & S. Selvendran (2021), "A highly birefringent photonic crystal fiber with compact cladding layers suitable for fiber optic gyroscope application", Laser Physics, IOP Publishing, <https://doi.org/10.1088/1555-6611/ac0049>.
- 58 N. Aravindan, **A.Sivanantha Raja**, S. Selvendran, M. Balasubramonian, and K. Esakki Muthu (2021), "1.3Gbps OOK Modulated Phosphorescent White LED using Optimized Lattice Pre-Equalization Circuit in Visible Spectrum", Optik - International Journal for Light and Electron optics, <https://doi.org/10.1016/j.ijleo.2021.167214>.
- 59 S. Selvendran, **A.Sivanantha Raja**, K. Esakki Muthu, S. Yogalakshmi (2021), "Surface plasmon based fiber optic refractive index sensor", Indian Journal of Engineering and Material Sciences, Vol.28, Feb.2021, pp. 102-107.
- 60 J. Divya, S. Selvendran, **A. Sivanantha Raja**, **A. Sivasubramanian**, (2021), "Graphene-Au-Coated Plasmonic Sensor Based on D-Shaped Bezier Polygonal Hollow Core Photonic Crystal Fiber", Braz J Phys (2021), DOI: [10.1007/s13538-021-00969-6](https://doi.org/10.1007/s13538-021-00969-6).
- 61 S.C. Sivaprakash, K. Monika, **A. Sivanantha Raja** (2022): "Wide Band Folded Coupled Line Power Divider Using Metamaterial for Mobile Application", Wireless Personal Communications, <https://doi.org/10.1007/s11277-022-09572-7>
- 62 N. Aravindan, **A. Sivanantha Raja**, S. Selvendran, M. Balasubramonian (2022): "Dual Channel Indoor VLC System Using PDM Scheme: An Investigation", Optical and Quantum Electronics 54:229, <https://doi.org/10.1007/s11082-022-03634-7>
- 63 J. Divya, S. Selvendran, **A. Sivanantha Raja**, **A. Sivasubramanian** (2022): "Surface plasmon based plasmonic sensors: A review on their past, present and future", Biosensors and Bioelectronics: X, Elsevier, 11:100175, <https://doi.org/10.1016/j.biosx.2022.100175>.
- 64 Selvendran, S.; Divya, J.; **Sivanantha Raja**, A.; Sivasubramanian, A.; Itapu, S. A Reconfigurable Surface-Plasmon-Based Filter/Sensor Using D-Shaped Photonic Crystal Fiber. *Micromachines* 2022, 13, 917. <https://doi.org/10.3390/mi13060917>
- 65 Sarojini, R., **Sivanantharaja**, A. & Selvendran, S. All-optical wavelength conversion of 80 gbps CSRZ-DPSK data signal using cross polarization modulation in single wideband SOA with sub-mw pump power. *Opt Quant Electron* 54, 314 (2022).

<https://doi.org/10.1007/s11082-022-03540-y>

- 66 D.Shanmuga Sundar, R. Sitharthan, M. Karthikeyan, T. Arun, M. Rajesh, **A.Sivanantha Raja**, and Marcos Flores C, (2022), "Flexible compact system for wearable health monitoring applications", Computer and Electrical Engineering, Elsevier 102, pp.108130, doi: 10.1016/j.compeleceng.2022.10813
- 67 D.Shanmuga Sundar, **A.Sivanantha Raja**, Arun T, Gnanaprakasam P, and Marcos Flores C, (2022), "Surface Engineering of High-Temperature PDMS Substrate for Flexible Optoelectronic Applications, Chemical Physics Letter, 800, pp.13969, Elsevier, doi: 10.1016/j.cplett.2022.139692.
- 68 C. Priyadharshini, R. Devika, S. Selvendran, **A. Sivanantha Raja** (2023): "Investigating the cross core octagonal photonic crystal fiber with high birefringence – A design and analysis study", Materials today: Proceedings, <https://doi.org/10.1016/j.matpr.2023.03.063>
- 69 C Priyadharshini, S Selvendran, **A Sivanantha Raja**, S Itapu, R Sollapur (2023): "A highly birefringent and compact nonlinear photonic crystal fiber for next-generation optical fiber applications: design and investigation." Published in Optical and Quantum Electronics 55 (10), 916, 2023.
- 70 J Divya, S Selvendran, **A Sivanantha Raja**, V Borra (2023): "A Novel Plasmonic Sensor Based on Dual-Channel D-Shaped Photonic Crystal Fiber for Enhanced Sensitivity in Simultaneous Detection of Different Analytes." Published in IEEE Transactions on Nano Bioscience.
- 71 J Divya, S Selvendran, **A Sivanantha Raja**, K Chitra (2024): " Silver-TiO<sub>2</sub> Coated D-Shaped Photonic Crystal Fiber Based SPR Sensor for Ultrasensitive Refractive Index Detection: Design and FEM Analysis", Physica Scripta. doi: 10.1088/1402-4896/ad1864.

## SCOPUS INDEX JOURNAL

- 1 **Sivanantha Raja A.** and Sankaranarayanan K (2007), 'Digital Image processing technique for blood glucose measurement', Research Journal of Medical Sciences, Medwell Journal, Vol. 1, No.1, pp.42-46.
- 2 **Sivanantha Raja A.**, Venugopal D and Navaneethan S (2012): "An efficient colored medical image compression scheme using curvelet transform", European Journal of Scientific Research, Vol.80, No.3, pp.416-422.
- 3 Venugopal D, **Sivanantha Raja A** and Uma M (2013): "Multistage compression of encrypted images for band effective secured transmission and reconstruction", International Journal of Tomography and simulation, Vol.24, No.3. pp. 86-94.
- 4 Maheswara Venkatesh P and **Sivanantha Raja A** (2014): "Energy efficient optical burst chain switching with QOS aware networks", Australian journal of basic and applied sciences, Vol. 8(10), pp. 334-342.
- 5 S. Geerthana, **A. Sivanantha Raja**, D. Shanmuga Sundar (2015), "Design and Analysis of Square and Hexagonal Lattice Photonic Crystal Fiber with Elliptical Air Hole", International Journal of Applied Engineering and Research (IJAER), Vol. 10 No.25 (2015), pp. 21266-21269.
- 6 C. Jenila, **A. Sivanantha Raja** (2015), "Data Acquisition Time Reduction in Raman Spectroscopy Imaging", International Journal of Applied Engineering and Research (IJAER), Vol. 10 No.25 (2015), pp. 21259-21262.
- 7 G. Rajalakshmi, **A. Sivanantha Raja**, D. Shanmuga Sundar (2015), "Modeling of Two Dimensional Heterostructure Photonic Crystal Ring Resonator Based Optical Filter", International Journal of Applied Engineering and Research (IJAER), Vol. 10 No.25 (2015), pp. 21274-21277.
- 8 K. Rohini Priya, **A. Sivanantha Raja**, D. Shanmuga Sundar (2015), "Design and analysis of square lattice based twin core photonic crystal fiber coupler", International Journal of Applied Engineering and Research (IJAER), Vol. 10 No.25 (2015), pp. 21270-21273.
- 9 S. Seetha Lakshmi, **A. Sivanantha Raja**, D. Shanmuga Sundar (2015), "Nano sized 1x4 2D Pillar Photonic Crystal Power Splitter based on Finite Difference Time Domain Method", International Journal of Applied Engineering and Research (IJAER), Vol. 10 No.25 (2015), pp. 21263-21265.
- 10 D. Shanmuga Sundar, **A. Sivanantha Raja** (2015), "Review of flexible substrates suitable for opto-electronic devices", International Journal of Applied Engineering and Research (IJAER), Vol. 10 No.25 (2015), pp. 21293-21295.
- 11 P. Kannan, R. Shantha Selvakumari, **A. Sivanantha Raja** (2015): "FPGA implementation of rotated local gabor XOR pattern for hybrid face recognition system", International journal of Applied Engineering Research, Vol.10, No.5, pp.11661-11676.
- 12 P. Kannan, R. Shantha Selvakumari, **A. Sivanantha Raja** (2015): "FPGA implementation of hybrid face recognition system based on real and imaginary kernels of rotational invariant system", Australian journal of basic and applied sciences, Vol. 9(7), pp.623-630.
- 13 S.C.Siva Prakash, M.Pavithra, and **A.Sivanantharaja**: "Design of compact line wide band power divider with open stub", ARPN Journal of Engineering and Applied Sciences, Vol. 10, No. 8, 2015 pages 3756 - 3760.
- 14 Rajeshkumar V R S and **Sivanantha Raja A**: "ECG compression using modified Huffman coding and efficient QRS detection", International Journal of Applied Engineering Research, Vol. 10, No. 8, 2015 pages 19703 - 19713.
- 15 K. Esakki Muthu, **A.Sivanantha Raja** and C.Suria Gandhi, "80 GHz millimetre wave generation using octupling technique and 2.5 GHz full duplex RoF transmission",

- International Journal of Applied Engineering Research, Vol. 10, No. 20, 2015 pages 19264 - 19267.
- 16 S.C. Sivaprakash, M. Vinotha, **Sivanantha Raja A**: "Design of wideband power divider", International Journal of Applied Engineering Research, Vol. 10, No. 55, 2015 pages 308 - 313.
- 17 S.C. Sivaprakash, A. Abuthaahir, K.M. Sivaprasath, B.S. Vijayram, **A.Sivanantha Raja**, "A comparison of multiband rectangular patch antenna with asymmetrical slotted lines using RF tools", International Journal of Applied Engineering Research, Vol. 10, No. 55, 2015 pages 2431 - 2435.
- 18 D.Venugopal, S.Mohan, **A.Sivanantha Raja**: "An improved lossless medical image compression using block-based transformation and Huffman coding", International Journal of Applied Engineering Research, Vol. 10, No. 49, 2015 pages 641 - 646.
- 19 D.Venugopal, **A.Sivanantha Raja**, P.Jagan Prabhakaran, B.Ayyankalai, S.Seemaichamy: "FPGA implementation of Lossless compression of color medical images by hierarchical prediction and arithmetic coding", International Journal of Applied Engineering Research, Vol. 10, No. 55, 2015 pages 74 - 77.
- 20 K.Esakkimuthu, **A.Sivanantha Raja**, K.Ranjani: "Transmission performance of 60 GHz optical millimetre wave with two modulation format", International Journal of Applied Engineering Research, Vol. 10, No. 66, 2015 pages 27 - 33.
- 21 V.R.S. Rajeshkumar and **A.Sivanantha Raja** (2015): "Feed forward neural network optimized usng PSO and GSA for the automatic classification of heart beat", Middle-East journal of Scientific research, 23 (5), 2015, pp. 896-901.
- 22 D.Shanmuga Sundar, **A.Sivanantha Raja**, C.Sanjeeviraja, D.Jeyakumar, (2016): "Synthesis and characterization of transparent and flexible polymer clay substrate for OLEDs", Materials Today: Proceedings, Vol. 3 pages 2409–2412.
- 23 K.Manivannan, **A. Sivanantha Raja**, S.Selvendran (2016): "Performance Investigation of Visible Light Communication System Using Optisystem Simulation Tool", International journal of Microwave and Optical technology, Vol.11, No.5, Sept.2016, pp.377-383.
- 24 G. Bhuvaneswari, D. Shanmuga Sundar and **A. Sivanantha Raja** "PANDA ring resonator for optical Gas and Pressure sensing applications" International Journal of Control Theory and Applications, Volume : No.9 (2016) Issue No.: 8 (2016), Pages: 3415-3422.
- 25 K.M. Pandimeenal, **A. Sivanantha Raja** and S. Selvendren "Study of the Performance of Free Space Optic Communication with Multiple Phase Encoded Signal under Different Weather Condition" International Journal of Control Theory and Applications, Volume: No.9 (2016) Issue No. : 8 (2016), Pages: 3423-3430.
- 26 R. Sathyadevaki, D. Shanmuga Sundar and **A. Sivanantha Raja**, "Diagonally coupled hexagonal photonic crystal filter for optical supervisory channel" International Journal of Control Theory and Applications, Volume : No.9 (2016) Issue No.:8 (2016), Pages : 3491-3496.
- 27 K. Esakki Muthu and **A. Sivanantha Raja** "2.5 Gbps Millimeter-Wave Radio over Fiber Transmission based on Dual Octupling of RF Local Oscillator" International Journal of Control Theory and Applications, Volume : No.9 (2016) Issue No. :8 (2016), Pages : 3529-3534.
- 28 P. Maheswarenkatesh, **A. Sivanantha Raja** and T. Jayasankar "Enhancing The QoS in Energy Efficient Wdm/OFDM Passive Optical Networks" International Journal of Control Theory and Applications, Volume : No.9 (2016) Issue No. :8 (2016), Pages : 3505-3514.
- 29 S.C. Sivaprakash, **A. Sivanantharaja**, P. Senthil Babu and K. Monika "Size reduction of UWB power divider using double tapered transmission line" International Journal of

- Control Theory and Applications, Volume : No.9 (2016) Issue No. :8 (2016), Pages : 3515-3519.
- 30 Kalaiselvan C. and **Sivanantha Raja A**. "Tracking System For Real Time Video Surveillance Applications" International Journal of Control Theory and Applications, Volume : No.9 (2016) Issue No. :8 (2016), Pages : 3535-3542.
- 31 R. Yamuna Devi, D. Shanmuga Sundar and **A. Sivanantha Raja** "Negative epsilon medium based optical fiber for transmission around UV and visible region" International Journal of Control Theory and Applications, Volume : No.9 (2016) Issue No. :8 (2016), Pages : 3581-3587.
- 32 D.Shanmuga Sundar, A.Sivanantha Raja, C.Sanjeeviraja and D.Jeyakumar, "High temperature processable flexible polymer films", International Journal of Nano science, Vol.15, No.4 (2016) 166038 (5 pages).
- 33 Maheswara venkatesh, **A.Sivanantha Raja**, T.Jayasankar, and K.Vinothkumar, (2017) , "QoS Aware and Green Hybrid Access Network", Applied Mathematics & Information Sciences – An International Journal, Vol.11, No.3, pp.819-825
- 34 M. Meenakshi, R. Sivakumar, **A. Sivanantharaja**, and C. Sanjeeviraja, (2017), "Electrochromic performance of RF sputtered WO<sub>3</sub> thin films by Li ion intercalation and de-intercalation", AIP Conference Proceedings 1832, 08000,3 doi: 10.1063/1.4980463.
- 35 C.Kalaiselvan and **A.Sivanantha Raja**, (2017), "Robust Gait-Based Gender Classification for Video Surveillance Applications", Applied mathematics & information sciences - An International Journal, Vol.11, No.4, pp.1207-1215.
- 36 K. Esakki Muthu, VN. Jannath Ul Firthouse, S. Sorna Deepa, **A. Sivanantha Raja** and S. Robinson, (2019), "Design and Analysis of 3-Input NAND/NOR/XNOR Gate Based on 2D Photonic Crystals", J. Opt. Commun. DE GRUYTER, <https://doi.org/10.1515/joc-2018-0210>.
- 37 Aravindan.N and **Sivanantharaja A** (2019), "Performance Analysis of 200 Mb/s Indoor Visible Light Communication System Using Composite White Light Source", Journal of Computational and Theoretical Nanoscience, Vol.16, Issue.4, pp.1465-1471 (17), doi: 10.1166/jctn.2019.8059.
- 38 S.Selvendran, **Sivanantharaja A** (2019): "Performance investigation of optical wavelength conversion using a newly designed highly nonlinear fibre with ultra-flattened dispersion", Quantum Electronics, 49(6):585-592

### NON-INDEXED JOURNAL

- 1 **Sivanantha Raja A** and Sankaranarayanan K. (2006), 'Use of RGB Color Sensor in Colorimeter for better Clinical measurement of blood glucose', ICGST International Journal on Bioinformatics and Medical Engineering, Vol.6, Issue 1, pp.23-28.
- 2 **Sivanantha Raja A** and Sankaranarayanan, K (2008): "Design of novel Colorimeter with RGB Color sensor and its performance comparison with Colorimeter in vogue", GITAM Journal of Information Communication Technology, Vol.1, No.1, pp.116-123.
- 3 **Sivanantha Raja A** and Sankaranarayanan, K (2009): "Novel Colorimeter with RGB Color sensor", Journal of Instrumentation Society of India, IISC, Bangalore, Dec 2009.
- 4 Haridass Vijayan, **Sivanantha Raja A** and Lethakumari,B (2009): "Simulation of an OFDM System", SJCET Journal of Engineering and Management, Vol.2, No.2, pp.55-60.
- 5 Sahaya Sheela M, **Sivanantha Raja A** and Sarma Dhulipala V R (2010): "Parametric

- Analysis of Mobile Ad-Hoc Network Environment", International Journal of Computer Applications, Vol.9, No.9, pp.33-36.
- 6 Ashoka kumar Ratha and **Sivanantha Raja A** (2011): "Performance analysis of OSCM tansmission systems by using dual electrode MZ-modulator", International Journal of Engineering, Science and Technology, Vol.3, No.6, pp.2753-2757.
  - 7 Sivakumar P, and **Sivanantha Raja A** (2013): "Transmission performance of hybrid 2x8 SCM/WDM system based on EDFA, Raman and Hybrid Amplifiers", CiiT International Journal of Digital Signal Processing, Vol. 5, No. 3, pp. 97-101.
  - 8 Mohanapriya T K, **Sivanantha Raja A**, and Shanmuga Sundar D (2013): "Performance analysis of 200-Gb/s low complexity transmission in second window", International Journal of Computer Applications, Vol.68, No.22, pp. 5-8.
  - 9 Venugopal D, and **Sivanantha Raja A** (2013): "Multistage Compression of medical images for ultra low power device applications", International journal of Scientific and Engineering research" Vol. 4, No. 5, pp. 2230-2235.
  - 10 Nisha N and **Sivanantha Raja A** (2013): "Improvement of BER in WDM Optical Communication system with Binary and Duobinary modulation format using FWM", IJAVD, Vol.3(1), pp. 45-48.
  - 11 Thiripura Sundari S, Maheshwara Venkatesh P and **Sivanantha Raja A** (2013): "A Novel Protocol for Energy Efficient Clustering for Heterogeneous Wireless Sensor Networks", International Journal of Scientific and Engineering Research, Vol.4, No.8, pp. 132-136.
  - 12 Keerthika.S.S, **Sivanantharaja.A**, Selvendran.S and Mahendran.C (2014): "10 Gbps NRZ Wideband Wavelength Conversion using Nonlinear Polarization Rotation Effect in Semiconductor Optical Amplifier", International Journal of Scientific Research Engineering & Technology (IJSRET), Vol. 2 (12), pp 821-826.
  - 13 Keerthika.S.S, **Sivanantharaja.A**, Selvendran.S and Mahendran.C (2014): "Analysis of Cross Polarization Modulation in Semiconductor Optical Amplifier for Wavelength Conversion", International Journal of Computer Science and Information Technologies, Vol. 5 (1) , pp 901-903.
  - 14 S. Geerthana, **A. Sivanantha Raja**, D.Shanmuga Sundar (2015), "Design of Circular Air Hole Photonic Crystal Fiber with Square Lattice and Analysis of its Modal Properties" International Journal of Advanced Research Trends in Engineering and Technology, vol. 2, Issue. 23, pp. 181-185.
  - 15 C. Jenila, **A. Sivanantha Raja** (2015), "Implementation of Coded Aperture Compressive Sampling in Raman Spectroscopy Imaging" International Journal of Advanced Research Trends in Engineering and Technology, vol. 2, Issue. 23, pp. 176-180.
  - 16 G. Rajalakshmi, **A. Sivanantha Raja**, D.Shanmuga Sundar (2015), "Design and Optimization of Two Channel Drop Filter based on Two dimensional Photonic Crystal" International Journal of Advanced Research Trends in Engineering and Technology, vol. 2, Issue.23, pp. 195-199.
  - 17 K. RohiniPriya, **A. Sivanantha Raja**, D.Shanmuga Sundar (2015), "Modeling of Twin Core Liquid Filled Photonic Crystal Fiber Coupler with Elliptical Air Holes" International Journal of Advanced Research Trends in Engineering and Technology, vol. 2, Issue. 23, pp. 186-190.
  - 18 S. Seetalakshmi, **A. Sivanantha Raja**, D.Shanmugasundar (2015), "Ultracompact 2D Pillar Photonic Crystal Power Splitter with Flexible Structural Defects" International Journal of Advanced Research Trends in Engineering and Technology, vol. 2, Issue. 23, pp. 191-194.
  - 19 K. Manivannan, **A. Sivanantha Raja**, S. Selvendran: "Channel characterization for visible light communication with the help of MATLAB", International journal of

- advanced research in computer science and software engineering, Vol. 5, Issue 12, 2015, pp. 155-159.
20. K. Manivannan, **A. Sivanantha Raja**, S. Selvendran (2016): "Study of the impact of receiver aperture diameter, LED electron carrier life time and RC time constant on visible light communication using Optisystem simulation", International Journal of Advanced Engineering Technology, Vol. VII, Issue I, pp.375-378.
21. Kalaiselvan Chetty, **A.Sivanantha Raja** (2016): "Extraction of video sequences with background extraction using Ant colony algorithm", Asian Journal of research in Social sciences and Humanities, Vol. 6, No.6, pages 675–690.
22. Mupidathi@Saravanan A, **Sivanantha Raja A**, Selvendran S (2016): "Implementation of 4 bit Gray to optical binary converter using the electro optic effect in the MachZehnder interferometer", Advances in natural and applied sciences, 10(4), pages 116-121.
23. Yogalakshmi S, Selvendran S, Helena Margaret D, **Sivanantha Raja A** (2016): "Design of polarization filter using surface plasmon resonance based square latticed photonic crystal fiber", Advances in natural and applied sciences, 10(4), pages 122-126.
24. R.Yamunadevi, D.Shanmuga Sundar, **A.Sivanantha Raja**. (2016): "Integration of metamaterial in tapered hollow core fiber for slow light propagation", Advances in natural and applied sciences, Vol. 10(10), pages 226-231.
25. Arul kumar Y, **Sivanantharaja A** and Selvendran S, (2017), "Developing the Image Quality of the Two Dimensional Photonic Crystal Slab by Modifying Shape of the Photonic Crystal", ADVANCES in NATURAL and APPLIED SCIENCES, ISSN: 1995-0772, No.7, pages 1-6.
26. T.Dharchana, **Sivanantharaja A** and Selvendran S, (2017), "Design of Pressure Sensor Using 2D Photonic Crystal", ADVANCES in NATURAL and APPLIED SCIENCES, ISSN: 1995-0772, No.7, pages 26-30.
27. J.Divya, **Sivanantharaja A** and Selvendran S, (2017), "High Sensitive Triple Nanocavity Biosensor Based on 2-D Photonic Crystal", ADVANCES in NATURAL and APPLIED SCIENCES, ISSN: 1995-0772, No.7, pages 31-35.
28. S.Divya, **Sivanantharaja A** and Selvendran S, (2017), "Designing of All Optical NAND Gate Based On 2D Photonic Crystal", ADVANCES in NATURAL and APPLIED SCIENCES, ISSN: 1995-0772, No.7, pages 36-40.
29. D.Rajeswari, **Sivanantharaja A** and Selvendran S, (2017), "Numerical analysis of polarization filter using photonic crystal fiber with gold metal", ADVANCES in NATURAL and APPLIED SCIENCES, ISSN: 1995-0772, No.7, pages 80-84.
30. M.Saranya Devi, **Sivanantharaja A** and Selvendran S, (2017), "High compact temperature sensing using 2D PhC based silicon on insulator technology", ADVANCES in NATURAL and APPLIED SCIENCES, ISSN: 1995-0772, No.7, pages 85-91.
31. M.Meenakshi, R. Sivakumar, **A.Sivanantharaja** and C.Sanjeeviraja (2018): "Characterization of Amorphous and Transparent, RF Sputtered V2O5 doped WO3 Thin Films", Advances in Biomaterials Research, Volume 1(1): 1 - 4.
32. Selvendran, S and **Sivanantharaja A** (2018), "Investigation on the Influence of Duobinary and CSRZ Modulation Formats on Self Phase Modulation Effect in Optical Communication Network", International Journal of Scientific Research in Physics and Applied Sciences, Vol.6, Issue.4, pp.17-22.
33. Mageshwari A, **Sivanantha Raja A**, Selvendran S, Esakki Muthu K, Gopi N (2019), "A novel PhC based 4-channel nano-cavities bio-sensor for diagnosis of hemoglobin disorders from different states of blood samples", Journal of Applied Science and Computations, Vol. VI, Issue VI, June 2019, pp 2883-2892.

## **Dr. A. Sivanantha Raja**

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- 34 K. Booma, N. Aravindan, **A. Sivanantha Raja** (2019), "Audio Transmission and Waveform Shaping using Visible Light Communication", International Research Journal of Engineering and Technology (IRJET), Vol.6, Issue.4, pp.4172-76.
- 35 Y.N.S. Vamsi Mohan, **A. Sivanantha Raja** (2021): "A Survey on Solar Cell based receivers used for Optical Wireless Communication", International Journal of Engineering Research and Applications, 2021, Vol. 20, No.1, pp.32-36.
- 36 R. Priyadharshini, **A. Sivanantha Raja** (2023): "Performance analysis of various pre-equalization techniques for visible light communication", International journal of Progressive research in Engineering, Management and Science, Vol. 03, Issue 03, pp. 70 – 76.
- 37 R. Priyadharshini, **A. Sivanantha Raja** (2023): "Post-equalization techniques for visible light communication technology", International journal of Research publications and reviews, Vol.4, No.3, pp. 738 – 741.