

LIST OF PUBLICATIONS:

INTERNATIONAL CONFERENCES

2018

1. Dhakshinamoorthy T, Prita Nair, "Modeling and Application of MEMS Micro Mirrors for Periodic Pattern Generation", International Conference on Advanced Semiconductor Materials and Devices, Indian Institute of Chemical Technology, Hyderabad, 8-10 March, 2018.

2017

2. Dhakshinamoorthy T, Prita Nair, "Modeling 3-Dimensional Electro Thermal Actuation of MEMS Mirrors", International Conference on NextGen Electronic Technologies: Silicon to Software, VIT Chennai, 23-25 March 2017

2016

3. Balasubramaniam M , Resmi K.S, Prita Nair, "1-D Photonic Crystal Based Dynamic Encoder/Decoder for 2D W-T OCDMA System", 3rd International Conference on Optronics and Applied Optics, (Optronix 2016), University of Engineering and Management, Kolkatta, India , 18th –20th August 2016, **(Best Student Paper award)** Advances in Optical Science and Engineering, Springer Proceedings in Physics 194, ISBN 978-981-10-3907-2

2015

4. Balasubramaniam M, Prita Nair, "Design And Analysis of Optical QAM Scheme Using an Electro-optic Microring Resonator", **IEEE Workshop on Recent Advances in Photonics**, 16-17 December, IISc Bangalore, 2015 – **(Best Student Paper award)**
5. Resmi K.S, Prita Nair, "Design of a Si-EO Polymer Hybrid WH/TS Encoder with Transformation Optics Based Waveguide Coupler", ", **IEEE Workshop on Recent Advances in Photonics**, 16-17 December, IISc Bangalore, 2015 – **(Best Student Paper award)**
6. Latha G, Prita Nair, "Feasibility Study of a PCF Sensor for In-Situ Monitoring of Silicone Oil Contamination in Transformers", **International Conference on Advances in Science, Management and Engineering**, 26, December, 2015-**(Best Student Paper award)**
7. Latha G, Prita Nair, "Optical sensing of biofuel blending ratios using solid Core PCF", **1st International Conference on Optoelectronics and Photonic Materials, (ICOMPA 2015)**, Feb 27-28, 2015, SASTRA University, Thanjavur, India

2014

8. Sujatha L, Prita Nair, "Simulation and fabrication of porous silicon based Mach Zehnder interferometer for biochips", **IIIrd IEEE International Conference on Emerging Electronics-Materials and Devices**, IISc Bangalore, Dec 3-6, 2014.
9. Latha G, Prita Nair, "Commercial Solid Core Photonic Crystal Fibers for Sensing Applications", COMSOL Conference, Bangalore, Nov 4-5, 2014

10. Mahesh N.R, Prita Nair, "Acoustic metamaterial based denoising filters and demultiplexers for low frequency operations", **3rd BITS World Congress on Advanced Materials**, (WCAM-2014), Chongqing, China, 6-9 June 2014. **(Invited talk at Young Investigator Forum)**
11. Uday M. Bangavadi, Manipal Univ. (India); Prita Nair, SSN College of Engineering (India), "Design and analysis of beam splitters and GRIN lenses using 2D photonic crystals in silicon for telecommunications" Paper 9130-41, Micro Optics Conference, April 14-16, **SPIE Photonics Europe 2014**, Proceedings of the SPIE, Volume 9130, Micro-optics 2014, 913015 6 pp (May 2, 2014) id. 913015-1 to 913015-6 pp. DOI: [10.1117/12.2055300](https://doi.org/10.1117/12.2055300), *Journal H-index: 151*

2013

12. Madhunikka Devi R, Prita Nair, "Experimental Characterization And Theoretical Modeling Of Mach Zehnder Interferometer For Dispersion Measurement", **IEEE Conference on Information and Communication Technologies (ICT 2013)**, Noorul Islam Centre for Higher Education, TamilNadu 11th-12th April 2013
13. Arshiya Suthana A.K, Prita Nair, "Study Of Generation Of Optical Frequency Combs Using Microring Resonators And Its Application To Optical Clock Rate Multiplication. ", **IEEE Conference on Information and Communication Technologies (ICT 2013)**, Noorul Islam Centre for Higher Education, TamilNadu 11th-12th April 2013

2012

14. Rajasekhar A, Prita Nair, "Implementation Of Optical Logic Gates", **International Conference on Recent Trends in Computer Science and Engineering, 2012**, 3-4 May 2012, Apollo Engineering College, Chennai, ,pg 89, ISBN 978-81-9089-807-2 © 2012
15. Balasubramainam M, Prita Nair, "Design Of Reconfigurable 2-D W/T OCDMA Decoder For Access Networks", **International Conference on Computing and Control Engineering (ICCC 2012)**, 12 & 13 April, 2012, ISBN 978-1-4675-2248-9 © 2012 Published by Coimbatore Institute of Information Technology
16. Renilkumar.M, Prita Nair, Low Loss 2-Port OADM Using 1-D Photonic Crystal And 3-Port Optical Circulator For CWDM Networks' **6th International Conference on Smart materials Structures and Systems**, Jan 4-7, 2012, Bangalore , sponsored by NPMAS, ADA –**Awarded 2nd Prize for Best Student Paper.**

2011

17. Mahesh N.R, Prita Nair, 'Experimental And Theoretical Investigation Of Acoustic Metamaterial with Negative Bulk-Modulus', **COMSOL Conference**, Bangalore, Nov 4-5, 2011
18. Renilkumar.M, Prita Nair, "Design and fabrication of fixed tunable photonic bandgap filters for advanced optical networks", **3rd International Winter School for Graduate Students & IVth INUP Familiarisation Workshop**, IISc Bangalore, Jan 3-8, 2011
19. Renilkumar.M, Prita Nair, "Micromachined Drop and Continue ROADM on Silicon Optical Bench Platform", **OPTICS: PHENOMENA, MATERIALS, DEVICES, AND CHARACTERIZATION: Optics 11, International Conference on Light**, May 23-24, 2011 held at NIT Calicut, Kerala., AIP Conference Proceedings, Volume 1391, pp. 315-317 (2011).

20. Sangamithra M, Prita Nair, "Design and Analysis of Ring Resonator based Programmable Optical Buffer for CWDM and DWDM Optical networks" presented at **International conference on Information , Communication and Embedded systems(ICICES 2011)**, at S.A Engineering College, Chennai.pp.97
21. Sujithaa S, Prita Nair, "A Design Of 2D Incoherent OCDMA Encoder For Future Optical Access Networks" is accepted for presentation at the **3rd International Conference on Electronics Computer Technology (ICECT 2011)**, Kanyakumari.
22. Sujithaa S, Prita Nair, "Design and analysis of PC based 2D OCDMA encoder for future PON" **International Conference on Recent Trends in Information Technology (ICRTIT 2011)** June 3-5, 2011 in Madras Institute of Technology, Anna University, Chennai, India.

2010

23. Renilkumar.M, Prita Nair, "Low loss optical channel drop filters based on high contrast Si/Air photonic crystals by wet anisotropic etching", **International Conference on Fiberoptics and Photonics, Photonics 2010, IIT Guwahati.**, Dec 12-15, 2010.
24. Renilkumar.M, Prita Nair, Renilkumar M , Prita Nair, "Widely tunable multi-wavelength channel drop filter on <110> oriented SOI Wafers by anisotropic chemical wet etching", **SPIE Photonics Europe 2010**, April 12-16,2010 (Awarded Best Student Paper in the session on Silicon Photonics & Integrated Optics at SPIE Photonics Europe 2010)
25. D. Nikedhana, Prita Nair, "MEMS based microdisk resonator for filtering cum optical buffering for application in granularity flexible OCDMA-ROADM", **International Conference on Embedded Systems**, Coimbatore July 2010
26. Renilkumar .M, Prita Nair, "Design and Analysis of a Tunable optical Channel-drop Filter based on high-index contrast Si/Air broadband reflectors" –Optical Networking and Data Security, OPNTDS 2010 part of **International Congress on Ultra Modern Telecommunications**, October 18-20, 2010, Russia

2009

27. Renilkumar.M, Prita Nair, "Influence of squeezed air film damping on the settling time of MEMS based photonic bandgap filter", **International Symposium on Microwave and Optical Technology (ISMOT-2009)**, Delhi , Dec 16-19.(2009)
28. Renilkumar.M, Prita Nair, "Design of a Tunable Fabry-Perot Photonic Bandgap Filter", **International Conference on Optics and Photonics**, (ICOP-2009), CSIO Chandigarh, India, 30th Oct-Nov 1 , 2009 .

2008

29. Renil Kumar, Prita Nair, V.Nagarajan, "Design and analysis of a quasi-colourless multiwavelength Edge-ROADM" **IEEE-ANTS 2008**, Dec 22-, IIT Mumbai (2008)

2007

30. S.N.Balasubramniam,Joel.Joseph,Madhesh P,K.R Harishkumar, K.Kalaiselvi, **Prita Nair** "A report on implementation of mapping and localization modules of a VSLAM simulator for Autonomous Vehicles on the Cell Broadband EngineTM", **International Conference on "Emerging trends in High Performance Architecture, Algorithms and Computing"** HiPAAC 2007,July 11-13, 2007

2006

31. Logeshwari, C.D, Prita Nair, "Re-configurable wavelength selective filters for dynamic wavelength provisioning in CWDM systems" **International Conference on Computers and Communications Devices, CODEC 2006, Kolkatta, India Dec 18-20, 215, (2006)**

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32. Kavita.M, Prita Nair, Raina J.P, Pushpa P.V, Maskara S.L, "Key components for optical networks of the future", **Proc. of IEEE TENCON'2002** China.,Vol.2, 1158-1161 2002.

1997

33. Nair, P, B. M.Sivaram, J. P. Raina, " Noise characteristics of erbium doped fiber amplifiers with pump excitation and signal upconversion losses", **Proc. SPIE**, Vol. **2996** Photonics West'97, 200-206, **1997**

1996

34. Nair, P, B. M.Sivaram, J. P. Raina,, "Experimental and theoretical studies of gain of EDFA's with pump excited state absorption and signal upconversion losses under co and contradirectional pumping", *Proc. SPIE*, 2249, 149-155, **1996**

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35. Nair, P, B. M.Sivaram, J. P. Raina, "**Proc.of CLEO/PACIFIC RIM - 95**, 303, Chiba.

1994

1. Joshi.M, Nair, P, B. M.Sivaram, J. P. Raina,, "Ring resonator Erbium doped fiber laser", **Proc. of SPIE**, 2149,. 28-35 1994, , *Journal H-index: 151*
2. Sivaram, B.M, P. Nair, M. Joshi and J. P .Raina, "In-situ loss determination in Erbium doped fiber lasers having different resonator configurations by studying relaxation oscillations", **Proc. of SPIE**, 2149, 36-41, 1994., , *Journal H-index: 151*

1992

3. Nair,P, M.Joshi, B.M.Sivaram and J.P.Raina, ""EDFA characteristics pumped both simultaneously and sequentially at different pump wavelengths and pump powers", **Proc.of SPIE**, 1789, 241-252, 1992, *Journal H-index: 151*

NATIONAL CONFERENCES**2018**

1. Resmi K.S, Prita Nair, "Realization of Submicron Features in P-type Silicon Through A Combination of Wet Etching Processes " **ISSS National Conference on MEMS, Smart Materials, Structures and Systems, , Thiagaraja College of Engineering, Madurai, . Oct 4-6, 2018**
2. Dakshinamoorthy T, Prita Nair, "Modeling and Applications of 3-D MEMS Micro Mirror in Lithography, Wide Band Optical wireless Communication", **ISSS National Conference on MEMS, Smart Materials, Structures and Systems, , Thiagaraja College of Engineering, Madurai, . Oct 4-6, 2018**

2013

3. Arshiya Suthana, Prita Nair, " Programmable optical clock rate multiplication using microring resonators", **ISSS National Conference on MEMS, Smart Materials, Structures and Systems, Sept 6-8, Pune India 2013**
4. Shruthi K, Chitra.S, Balasubramaniam M, PritaNair, "Modelling and experimental validation of electrothermal actuators for optical applications", **ISSS National Conference on MEMS, Smart Materials, Structures and Systems, Spet 6-8, Pune India 2013**

5. Prita Nair, Mahesh N.R, " Sonic Bandgap Structures and Metamaterials for Naval Applications," National Conference on Advances in Naval Materials (ADNAM-2013), sponsored by Naval Research Board, organized by IIT Madras & NIOT, Pallikkarnai, held at NIOT Pallikkarnai, Feb 22-23, 2013.
6. Mahesh N.R, Prita Nair, " Low Frequency Narrow-Bandwidth Acoustic Filters based on Acoustic Metamaterials", National Conference on Advances in Naval Materials (ADNAM-2013), sponsored by Naval Research Board, organized by IIT Madras & NIOT, Pallikkarnai, held at NIOT Pallikkarnai, Feb 22-23, 2013.
7. Prita Nair, " MEMS Based Reconfigurable Photonic Devices For Optical Communications" , National Conference on Recent Advances in Photonics (NCRAP -2013), sponsored by DST, BRNS, CSIR held at Meenakshi College for Women, Feb 8-9, 2013.

2012

8. Sujithaa S, Prita Nair, "Design Of Photonic Crystal Based Reconfigurable 2D W/T OC192 Incoherent OCDMA Encoder For Optical Access Networks", 5th National Conference on MEMS, Smart Materials, Structures and Systems, ISSS NC5, , held at Karpagam University, Coimbatore, September 21-22, 2012
9. Rajasekhar.A, Prita Nair, " Design of Novel All Optical Logic Gates Based on Microring Resonator", 5th National Conference on MEMS, Smart Materials, Structures and Systems, ISSS NC5, held at Karpagam University, Coimbatore , September 21-22, 2012

2011

10. Sujithaa S, Prita Nair, "A novel design of Photonic crystal based 2D OCDMA encoder", National Conference on EMBEDDED, MICROWAVE & INTEGRATED TECHNOLOGIES" on March 24 & 25, 2011 at Saveetha Engineering College, Thandalam, Chennai.

2010

11. Renilkumar M, Prita Nair, "A method for submicron pattern transfer with vertical sidewalls in RIE using Cr as bonus layer", **Fourth ISSS National Conference on Microsystems, Smart Materials, Structure, MS-04**, September 30 - Oct 01, 2010.
12. D. Nikedhana, Prita Nair, "Design of Microdisk resonator based filter cum buffer for application in granularity flexible OCDMA-ROADM", **National Conference of Signal Processing, Communication and Networking (NCSCN)**, pp 89-93, March 2010

2009

13. Sunil Kumar K, Prita Nair, "MEMS mirror based ROADM with multiple add-drop ports", **Proc. of National Conference on Optical Communications**, 2009, NCMOM 2009, 34-36, (2009)

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14. Logeshwari, C.D ,Prita Nair, "Wavelength Division Multiplexer for Metro Networks using Photonic Band Gap Structures", **Proc. of National Conference of Communication Technology (NCCT '06)**, MEPCO Schlenk Engg. College, 93-96, (2006).

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15. Nair, P, B. M.Sivaram, J. P. Raina, ""Experimental study of erbium doped fiber ring lasers", Proc. of National Laser Symposium-1995, 137-138.

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16. Nair, P, B. M.Sivaram, J. P. Raina, ""Studies of dual wavelength pumping schemes for high concentration Erbium doped fiber amplifiers", Proc. of Conference on Emerging Optoelectronic Technologies-1994, 157-160

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17. Nair, P, M. Joshi, B. M. Sivaram and J. P. Raina, "Comparison between forward and backward pumping schemes for EDFA's", Proc. of National laser Symposium India 1993, 166-167

1992

18. Nair, P, B. M.Sivaram, J. P. Raina, "Proceedings of the National Symposium on Antennas and Propagation, 1992, 374-378
19. Joshi,M, P. Nair, B.M.Sivaram, and J.P.Raina, "Gain characteristics of an Erbium doped optical fibre amplifier", Proceedings of the National Symposium on Antennas and Propagation, 1992, 340-342

1991

20. Nair,P, M.Joshi, B.M.Sivaram and J.P.Raina, "Characteristics of Erbium doped fiber laser", Proc. of the Conference on Emerging Optoelectronics Technologies,Bangalore, India, 1991, 142-146.

General Articles:

- Invited article focusing on SSN Institutions, "SSN Institutions- Kalavakkam stepping into micro and nano areas" in the Campus Buzz column of the magazine "Sukshma" brought out by Institute of Smart Structures and Systems(ISSS), Vol.5, No 1, January 2010.
- Article titled , "Optical Components with flexible granularity for Intelligent Access Networks- An overview of work at ORNL," Samshodhan", Research Bulletin of SSN Institutions Vol 2, No.1, March 2010.
- Article titled , "sir C.V Raman- A noble soul who won the Nobel Prize," Samshodhan", Research Bulletin of SSN Institutions Vol 1, No.2, April 2009.
- Article titled , " An International Mission with India as Captain", Samshodhan", Research Bulletin of SSN Institutions , Vol 1, No.1, Jan 2009.