

Research Publications:

1. Shamsul Hassan, **Devendra Chack** and Lorenzo Pavesi "Reconfigurable and Multifunction All Optical Logic Gates using Thermo-optic phase shifter for optical computing" **AIP Advances** 12, 055304 (2022) <https://doi.org/10.1063/5.0086185> (Impact Factor: 1.697)
2. Rukmani Singh, **Devendra Chack**, and Vishnu Priye, "SNROW-based highly sensitive label-free surface biosensor for hepatitis B detection," **Appl. Opt.** 61, 6510-6517 (2022). DOI No.: <https://doi.org/10.1364/AO.463800> (Impact factor: 1.905)
3. **Devendra Chack**, Shamsul Hassan, and Mohd Qasim. "Broadband and low crosstalk silicon on-chip mode converter and demultiplexer for mode division multiplexing." *Applied Optics* 59.12 (2020): 3652-3659. <https://doi.org/10.1364/AO.390085> (Impact Factor: 1.905)
4. Shamsul Hassan, **Devendra Chack**, and Varad Mahajan. "High extinction ratio and low loss polarization beam splitter based on multimode interference for PICs." *Applied Optics* 59.11 (2020): 3369-3375. <https://doi.org/10.1364/AO.387418> (Impact Factor: 1.905)
5. **Devendra Chack**, Shamsul Hassan and Amitesh Kumar (2021) "Broadband and Mode insensitive MMI based mode power splitter for MDM" *Laser Physics (IOP)* **31** 126205 <https://iopscience.iop.org/article/10.1088/1555-6611/ac312c> (Impact Factor: 1.366)
6. Shamsul Hassan, and **Devendra Chack**. "Design and analysis of polarization independent MMI based power splitter for PICs" *Microelectronics Journal* 104 (2020): 104887. <https://doi.org/10.1016/j.mejo.2020.104887> (Impact Factor: 1.605)
7. **Devendra Chack**, and Shamsul Hassan. "Design and experimental analysis of multimode interference-based optical splitter for on-chip optical interconnects." *Optical Engineering* 59.10 (2020): 105102. <https://doi.org/10.1117/1.OE.59.10.105102> Impact Factor: 1.084
8. Rukmani Singh, Vishnu priye and **Devendra Chack**, "Highly sensitive refractive index based sensor for DNA hybridization using subwavelength grating waveguide" *IETE Technical Review* (2022) <https://doi.org/10.1080/02564602.2021.2016076> (Impact Factor: 2.20)
9. Sanjeev Kumar Raghuwanshi, Yadvendra Singh, Mandeep Singh, **Devendra Chack**, Ritesh Kumar & Om Prakash "High sensitivity detection of chemicals based on sinusoidally apodized structured grating assisted liquid filled directional coupler" *Opt Quant Electron* **53**, 398 (2021). <https://doi.org/10.1007/s11082-021-03070-z> (Impact Factor: 2.084)
10. Sunil Thool, **Devendra Chack**, Amitesh Kumar (2021) "Coherent Detection-Based Optical OFDM, 60 GHz Radio-over-Fiber Link Using Frequency Quadrupling, and Channel and Carrier Phase Estimation" *Front. Phys.* 9:749497 <https://doi.org/10.3389/fphy.2021.749497> (Impact Factor: 3.56)
11. Abhinav Gautam, Amitesh Kumar, Jaisingh Thangaraj, **Devendra Chack**, Vishnu Priye, "Optical weight measurement system using FBG based D-IM edge filter detection, *Optical Fiber Technology*", 2020,102386 <https://doi.org/10.1016/j.yofte.2020.102386> (Impact Factor: 2.53)

12. **Devendra Chack**, V. Kumar, S. K. Raghuwanshi and Dev P Singh "Design and analysis of O-S-C triple band wavelength division demultiplexer using cascaded MMI couplers" *Optics Communications*, Volume 382, pp. 324–331, (2017)
<https://doi.org/10.1016/j.optcom.2016.08.016>
 (Impact Factor: 2.310)
13. **Devendra Chack**, N. Agrawal and S. K. Raghuwanshi, "To analyse the performance of tapered and MMI assisted splitter on the basis of geographical parameters", *Optik Int. J. Light Electron, Elsevier* Volume 125, Issue 11, pp. 2568-2571, (2014), (Impact Factor: 1.91,
<https://doi.org/10.1016/j.ijleo.2013.11.019>
 (Impact Factor: 2.443)
14. **Devendra Chack**, V. Kumar and S. K. Raghuwanshi, Design and performance analysis of InP/InGaAsP-MMI based 1310/1550-nm wavelength division demultiplexer with tapered waveguide geometry, *Opto-Electronics Review*, Volume 23, Issue 4, pp. 271–277, (2015),
<https://doi.org/10.1515/oere-2015-0039>
 (Impact Factor: 2.489)

Conferences

1. **Devendra Chack**, Shamsul Hassan, and Abhishek Kumar "Design and analysis of polarization beam splitter based on cascaded MMI on SOI", Proc. SPIE 11283, Integrated Optics: Devices, Materials, and Technologies XXIV, 1128320 (25 February 2020); <https://doi.org/10.1117/12.2544405>
 (The paper was presented in Photonics West OPTO 2020 (SPIE, the international society for optics and photonics), at **San Francisco, USA**)
2. S. Hassan and **Devendra Chack**, "MZI based Silicon photonic circuits for arbitrary power splitting application", *JSAP-OSA Joint Symposia 2018*, paper 21p_211B_8. at Nagoya Japan 18–21 September 2018.
 (The paper was presented in the conf.)
3. S. Hassan and **Devendra Chack**, "Design and performance analysis of MMI based all optical logic gates on SOI substrate," *2018 3rd International Conference on Microwave and Photonics (ICMAP), Dhanbad, 2018*, pp. 1-2.
4. S. K. Raghuwanshi, V. Kumar, **Devendra Chack**, and R.R. Pandey, "Dispersion study of even mode thin planar slab dielectric waveguide without computing $\frac{d^2\beta}{dk^2}$ numerically" *Procedia Technology*, Volume 1, pp 286–290, (2012).
5. **Devendra Chack**, V. Kumar and D. Singh. "Performance Analysis of 1310/1490 nm Demultiplexer based on Multimode Interference Coupler for PON", In *Proceedings of the 4th International Conference on Photonics, Optics and Laser Technology* ISBN 978-989-758-174-8, pp 223-226 (2016), Rome, Italy
 (The paper was presented in the conf.)
6. **Devendra Chack**, S. K. Raghuwanshi, V. Kumar and N. Agrawal, "Analyzing the Optimum Parameter of an 1×2 MMI Splitter" , *IEEE-International Conference on Communication Systems and Network Technologies, (CSNT-13)*, April 6-8, pp 149-151 (2013), Gwalior , India.

7. **Devendra Chack**, S. K. Raghuwanshi, V. Kumar and N. Agrawal, "Field Propagation Study of Y- Branch Assisted by MMI Coupler" *Proceedings of 3rd World Conference on Information Technology (WCIT-2012)*, 14-16 November 2012 pp 1795-1800 (2013), at University of Barcelona, Barcelona, Spain (The paper was presented in the conf.)
8. **Devendra Chack**, S. K. Raghuwanshi and V. Kumar "Pulse Propagation Study of 1×4 Multibranch Optical Waveguide Using 3-Y Branch Optical Waveguide" *Proceedings of 3rd World Conference on Information Technology (WCIT-2012)*, 14-16 November 2012, pp 1790-1794 (2013), at University of Barcelona, Barcelona, Spain (The paper was presented in the conf.)
9. S. K. Raghuwanshi, V. Kumar, **Devendra Chack**, and S. Kumar, "Propagation Study of Y-Junction Optical Splitter using BPM," *IEEE -International Conference on Communication Systems and Network Technologies (CSNT-2012)*, pp. 625-629, May 11-13 (2012), Rajkot, India.
10. S. K. Raghuwanshi, S. Kumar, V. Kumar, and **Devendra Chack**, "Propagation study of Y-branch having inbuilt optical splitters and combiner using beam propagation method," *Progress in Electromagnetics Research Symposium (PIERS 2012)*, August 19-23, 2012, PP. 720-724, Moscow, Russia.