Curriculum Vitae

Dr. Sourabh Sahu

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Objective

Seeking a challenging professional environment where I can widen my purview & equip myself with latest technical development benefiting the organization to the best of my abilities.

Educational Qualifications

Qualification	Board/University	Institution	Year of Passing	Remark/Percentage(%)/CGPA
Ph.D. (Electronics And Communication Engineering)	Malaviya National Institute of Technology Jaipur	Malaviya National Institute of Technology	23 February 2018	Area of Research: Nano Photonics
M.Tech (Electronics And Communication Engineering)	Malaviya National Institute of Technology Jaipur	Malaviya National Institute of Technology	2012	8.75
B.E. (Electronics And Communication Engineering)	Rajiv Gandhi Proudyogiki Vishwavidyalaya Bhopal	Gyan Ganga Institute of Technology and Science	2010	81.56
H.S.C. (12^{th})	CBSE	Maharishi Vidhya Mandir	2006	72.6
10^{th}	CBSE	Maharishi Vidhya Mandir	2004	74.2

Skills Set

Platforms: Windows 10, 8, 7, XP.

Languages: Basics of C, C++, SQL.

Software known: Python 3, MATLAB, SCILAB, Lumerical MODE, FDTD & Interconnect, RSoft, Optisystem, OptiFDTD, Proteus, Microsoft office.

Research Interests

Nano photonics, Photonic Crystal Fibre, Optoelectronics & Fibre Optics, Artificial Intelligence and Machine Learning.

Specialization and Expertise

- Modeling and Simulation of photonic devices
- Silicon Photonics
- Photonic Crystal Fibers
- Photonic Circuit Design

Professional Experience

01 Oct. 2021 – Till Date	Associate Professor, GGITS Jabalpur
28 Sept. 2018 – 30 Sept. 2021	Assistant Professor, Jabalpur Engineering College, Jabalpur
Jan. 2018 – 27 Sept. 2018	Adhoc Faculty, National Institute of Technology, Raipur
July 2014 – Oct. 2017	Teaching Assistant (MHRD sponsored during Ph.D.)
July 2012 – July 2014	Assistant Professor, Gyan Ganga College of Technology
July 2010 – June 2012	Teaching Assistant (MHRD sponsored during M.Tech.)

Developed a MOOC course ***SCILAB: The Open Source Alternative of MATLAB*** on UDEMY.
(url: https://www.udemy.com/course/scilab-an-open-source-alternative-of-matlab/)

Part-time working as Online Tutor with CHEGG (Electrical Engineering Expert)
(Teaching Experience : 6 yrs 6 month)
(Overall Experience 10 years 8 months, including teaching assistantship during M.Tech. and Ph.D.)

Academic Achievements

- Received a research project entitled "*Glucose Sensing using Mid-Infrared Plasmonic Polaritons*" under **Collaborative Research Scheme of TEQIP-III** with a total grant amount of Rs. 19.45 Lacs from MHRD, Govt. of India.
- Selected for the post of Assistant Professor at JEC Jabalpur through NPIU project of TEQIP – III.
- Received an OSA Officer Travel Grant to attend "Student Leadership Conference (SLC) 2016", at FiO/LS in Rochester New York, 16-18 September 2016.
- Vice President of OSA Student Chapter MNIT Jaipur (2016-2018).
- Received best paper award in IETE Zonal Seminar (National Conference) on ICT in Health Care.
- Qualified GATE 2010, 2012, and 2014 consecutively.
- Recipient of MHRD-Govt. of India-'Scholarship' during Ph.D. from July 2014 to October 2017.
- Recipient of MHRD-Govt. of India-'Scholarship' during M.Tech from July 2010 to May 2012.
- ZENSAR Technology offered a job for the post of a Junior Software Engineer in the academic session of 2010.
- Secured first rank in 7^{th} semester university exam and third rank in 3^{rd} year in ECE department during B.E.

Co-curricular Activities

- Completed *Faculty Training Program on Future Skill Technologies* on ***Machine Learning & Artificial Intelligence*** organized by IIT Indore held on 16-26 June 2021 sponsored by TEQIP-III, MHRD, Govt. of India.
- Completed *AICTE Training And Learning (ATAL) Academy FDP* on ***Data Science*** from 18 - 22 April 2020 at Indian Institute of Information Technology (IIIT Nagpur).
- Completed *National Level FDP* on ***Python 3.4.3*** from 19-23 May 2020 at Government Polytechnic, Awsari in association with Spoken Tutorial, IIT Bombay funded by NMEICT, MHRD Govt. of India.
- Organized a Technical Session of International Conference on Engineering Mathematical and Computational Intelligence held on 21-23 December 2019 at Jabalpur Engineering College, Jabalpur.
- Co-coordinator in TEQIP-III sponsored one week Student Training Program on Mechatronics Technology held from 02 – 07 March 2020 in the Department of E&TC Engineering at JEC Jabalpur.
- Coordinator during Academic Council Meeting organized on 10 August 2020 at Jabalpur Engineering College, Jabalpur.
- Coordinator in TEQIP-III sponsored one week Faculty Development Program on Recent Advancement in Electronics & Telecommunication Engineering held from 28 Sept 2020 – 03 Oct 2020 at JEC Jabalpur.
- Coordinator in Academic Counselling during the session of Oct 2020 held at Jabalpur Engineering College, Jabalpur.
- Resource person in one week AICTE sponsored Short Term Training Program on Recent Advances in Nano-Photonics Technology (RANT 2020) held from 14 – 19 Dec 2020 at SKIT Jaipur.
- Delivered an Expert lecture in the One-Day online workshop on Virtual Labs Hands on Outreach Workshop organized by Virtual Labs, IIT Bombay and Jabalpur Engineering College (NCID-242) on 23 Dec 2020.
- Attended two week course on *Digital Transformation in Teaching Learning Process* organized by IIT Bombay (16 March – 30 March 2020).
- Participated in the Online AICTE Recognized Faculty Development Programme on *Nanomaterials and Devices* Organized by Applied Science Department NITTTR, Chandigarh (25 May - 29 May 2020).
- Attended one day *Orientation Workshop for PI on Collaboration Research Scheme* organized by AICTE New Delhi (16 July 2019).
- Attended Faculty induction program on *Advanced Digital Pedagogy* organized by IIT Indore (16-21 June 2019).
- Attended one-day workshop on *Procurement through GeM* organized by SPIU Bhopal under TEQIP-III project (11 April 2019).
- Attended one-day workshop on *Google for Education* organized by SPIU Bhopal under TEQIP-III project (18 March 2018).
- Planned and Organized several invited talks from the experts of field of photonics (Prof. Takasumi Tanabe, and Hiroyuki Tsuda, from NTT labs Japan, Prof. Twafiq Ismail and

Hossam Selmi from Cairo University Egypt, Prof Antigone Marino and Paolo Minzioni from University of Pavia and Prof. Rim Cherif from University of Carthage, Tunisia).

- Coordinated on several student outreach programs for pre-college level students to demonstrate the fundamental experiments related to optics and photonics through OSA Optics Kit.
- Attended *INUP familiarization workshop* on *Nanofabrication Technologies* organized by IIT Bombay and MNIT Jaipur.
- Attended '*Train the Trainer'* program on Optical Fiber organized by Telecom Sector Skill Council (16-18 August 2016).
- Actively engaged in taking labs sessions and providing project guidance to M.Tech and B.Tech students.
- Member of organizing committee of International conferences *OWT-2017* and *COMPLTELIX-2017*.
- Member of organizing committee of national conferences on '*ICT in Health Care'* organized by IETE Zonal Seminar-North.
- Convener of the National Conference '*OSA Young Student Congress on Photonic Technologies*' organized at MNIT Jaipur (16-17 April 2016).
- Engaged lab sessions during the Short-Term Training Program (STTP) on *Advanced Power Electronics* organized for the participants of northwestern railways.

Summary of Research Output

- Google Scholar Citations: 212, h-index: 8, i10-index: 7
- Papers Published (SCI/SCIE Journal): 07 , SCOPUS Journal: 01
- International Peer-Reviewed Conferences (SCOPUS Indexed): 06
- National Peer Reviewed Conferences: 04
- Book Chapters (SCOPUS Indexed) : 04

Journals (International Peer Reviewed)

1. **Sourabh Sahu**; Jalil Ali; Ghanshyam Singh "Refractive index biosensor using sidewall gratings in dual-slot waveguide" *Optics Communications (Elsevier)*, volume 402 (8), pages 408–412, 1 November 2017. DOI: 10.1016/j.optcom.2017.06.051 (SCI Journal, IF: 2.125).
2. **Sourabh Sahu**; Jalil Ali; Preecha P. Yupapin; Ghanshyam Singh; K. T. V. Grattan "High-Q and temperature stable photonic biosensor based on grating waveguides" *Optical and Quantum Electronics*, 50:307, August 2018, ISSN 0306-8919, DOI: 10.1007/s11082-018-1578-x *(Springer)* (SCI Journal, IF:1.842).
3. **Sourabh Sahu**; Jalil Ali; Preecha P. Yupapin; Ghanshyam Singh "Optical biosensor based on a cladding modulated grating waveguide", *Optik – International Journal for Light and Electron Optics (Elsevier),* volume 166, pages 103-109, August 2018, ISSN 0030-4026, DOI:10.1016/j.ijleo.2018.04.034 (SCI Journal, IF: 2.187).
4. **Sourabh Sahu**; Preecha P. Yupapin; Jalil Ali; Ghanshyam Singh "Porous silicon-based Bragg-grating resonator for refractive index biosensing" *Photonic Sensors (Springer)*, volume 8 (3), pages 248-254, September 2018. DOI: 10.1007/s13320-018-0459-z (SCIE Journal, IF: 2.073).
5. **Sourabh Sahu**; Preecha P. Yupapin; Jalil Ali; Ghanshyam Singh "Effectiveness of Taguchi method for the optimization of narrowband optical filters based on grating waveguides" *Microsystem Technologies (Springer)*, volume 25 (3), March 2019, pages 789-795, 2019. DOI: 10.1007/s00542-018-4026-8 (SCI Journal, IF: 1.737).

6. **Sourabh Sahu**; Jalil Ali; Ghanshyam Singh "Optimization of dual-slot waveguide for refractive index biosensor" *Optica Applicata (PSP)*, volume 48 issue 1, pages 161-167, 2018. DOI: 10.5277/oa180115 (SCOPUS Journal, IF: 1.080).
7. Ghanshyam Singh; **Sourabh Sahu**; Praveen Chaurasia "Modeling of photonic crystal fibers with fibonacci-patterned circular and elliptical air holes" *Optical Engineering (SPIE)*, volume 51(11), pages 115001-115006, November, 2012. DOI:10.1117/1.OE.51.11.115001 (SCI Journal, IF: 1.209).
8. N. Mudgal; K.K. Choure; A.Agrawal; A.Sahari; **S. Sahu**; Ghanshyam Singh " Impact of Taguchi Optimization in Fiber Surface Plasmon Resonance Sensors Based on Si3N4 Layer" Brazilian Journal of Physics, volume 52(3), pages 1-10, March, 2022. DOI:10.1007/s13538-022-01088-6 (SCI Journal).

International Peer-Reviewed Conferences

1. **S. Sahu**, P. K. Jain, N. Mudgal, and G. Singh, "Glycosuria sensing based on nanometric plasmonic polaritons," IOP Conference Series: Materials Science and Engineering, vol. 1136, no. 1, p. 012064, Jun. 2021, DOI: 10.1088/1757-899X/1136/1/012064.
2. M. Gautam, **S. Sahu**, "Investigation of DPSK and OQPSK Techniques for FSO Communication Systems," 2021 International Conference on Computer Communication and Informatics (ICCCI), 2021, pp. 1-5, doi: 10.1109/ICCCI50826.2021.9402664.
3. **S. Sahu**, K. V. Kozadaev, G. Singh, "Michelson interferometer based refractive index biosensor," in 13th International Conference on Fiber Optics and Photonics, Photonic-16, IIT Kanpur, December 04-08, 2016, OSA Technical Digest, paper Th3A.60, ISBN: 978-1-943580-22-4, DOI: 10.1364/PHOTONICS.2016.Th3A.60.
4. **S. Sahu**, G. Singh "Modeling of phase shift Bragg grating biosensor for non invasive detection of blood components" IEEE International Conference, ICRAIE-2016, Manipal University Jaipur, India, December 23–25, 2016, IEEE Xplore Digital Library, pp 1-3, Print ISBN: 5090-2806, DOI: 10.1109/ICRAIE.2016.7939565.
5. **S. Sahu**, G. Singh "Modeling of grating slot waveguide for high-Q based refractive index sensor" IEEE International Conference COMPTELIX-2017, July 1-2, 2017, Jaipur, IEEE Xplore Digital Library, Page(s):394–396, DOI: 10.1109/COMPTELIX.2017.8004001.
6. P. Pravin Dali, A. Godbole, **S. Sahu**, G. Singh, and T. Tanabe, "Microring Resonator Based All Optical NAND and NOT Gate with Higher Output Power," in Asia Communications and Photonics Conference 2015, paper ASu2A.28., OSA Technical Digest (online) (Optical Society of America, 2015), Print ISBN: 978-1-943580-06-4. DOI:10.1364/ACPC.2015.ASu2A.28.

Book Chapters

1. Ghunawat A.K., Sharma S., Sahu S., Singh G. (2020) Highly Sensitive Octagonal Photonic Crystal Fiber for Ethanol Detection. In: Janyani V., Singh G., Tiwari M., d'Alessandro A. (eds) Optical and Wireless Technologies. Lecture Notes in Electrical Engineering, vol 546, pp 457-466, https://doi.org/10.1007/978-981-13-6159-3_48,Print ISBN: 978-981-13-6158-6, Electronic ISBN: 978-981-13-6159-3, Springer, Singapore, April 10, 2019.
2. Mudgal N., Agarwal A., Saharia A., Sahu S., Ghunawat A.K., Singh G. (2020) Comparative Study of Interferometer and Ring Resonator Based Biosensors: A Review. In: Janyani V., Singh G., Tiwari M., d'Alessandro A. (eds) Optical and Wireless Technologies. Lecture Notes in Electrical Engineering, vol 546, pp 419-427, https://doi.org/10.1007/978-981-13-6159-3_44, Print ISBN 978-981-13-6158-6, Springer, Singapore.

3. Saharia A., Agarwal A., Mudgal N., Sahu S., Ghunawat A.K., Singh G. (2020) A Comparative Study of Various All-Optical Logic Gates. In: Janyani V., Singh G., Tiwari M., d'Alessandro A. (eds) Optical and Wireless Technologies. Lecture Notes in Electrical Engineering, vol 546, pp 429-437, https://doi.org/10.1007/978-981-13-6159-3_45, Print ISBN 978-981-13-6158-6, Springer, Singapore.
4. Agarwal A., Sahu S., Singh G. and Bhatnagar S. K., "Photonic Crystal Cavities based Biosensors: A Review," 2020 International Conference on Emerging Trends in Communication, Control and Computing (ICONC3), Lakshmangarh, Sikar, India, 2020, pp. 1-5, doi: 10.1109/ICONC345789.2020.9117357.

National Peer Reviewed Conferences

1. Sourabh Sahu, Ghanshyam Singh, "Integrated Photonic Biosensors," in IETE Student Forum Congress – 2016 organized by IETE Rajasthan.
2. Sourabh Sahu, Ghanshyam Singh, "Biosensors in Mid-IR region on SON slot waveguide," in National conference on ICT in Health Care held at MNIT Jaipur organized by IETE 2016.
3. Nitesh Namdev, Sourabh Sahu, Ghanshyam Singh, "Optical Fiber to SOI Waveguide Coupling," in Advances in Wireless and Optical Communication Systems (AWOS-2012) held at SKIT Jaipur organized by IET Rajasthan 2012.
4. Sourabh Sahu, Ghanshyam Singh, "Characterization of Low Confinement Loss Photonic Crystal Fiber," in Innovations in Communication Systems & System Design (ICS2D-12) held at GGITS Jabalpur organized by IEEE MP Subsection 2012.

Personal Details:

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Permanent Address	:	HN 2713, Om Sai Niwas, Lal Building, Tripuri Chowk, Garha, Jabalpur, Pin: 482003 (M.P.).
Date of Birth	:	08 September 1988
Gender	:	Male
Marital Status	:	Married
Nationality	:	Indian
Religion	:	Hindu
Language Known		
To Speak	:	English, and Hindi
To Write	:	English and Hindi.
Hobbies	:	Listening Music, Meditation, and Reading Spiritual Books.

References:

1. ***Dr. Ghanshyam Singh***
   Designation : Professor
   Qualifications : Ph.D. (Photonics Engineering) from MNIT, Jaipur
   M.Tech. (Electronics and Communication) from MNIT Jaipur

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3 *Dr. K. K. Sharma*

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I do hereby state that the above-mentioned information is true to the best of my knowledge and belief and I believe it to be true.

Date: 24/02/2023

Place: Jabalpur

(Dr. Sourabh Sahu)