

CURRICULUM VITAE

Dr. BHANU P. S. DOHARE

Associate Professor

Department of Electronics & Communication Engineering

SoS Engineering & Technology

Guru Ghasidas Vishwavidyalaya (A Central University) Bilaspur, C.G.

Member-SMIEEE, OPTICA, OSI & SPIE

Research Area: VLSI, Semiconductors, AIML, Optics & Photonics

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- **Research Profile:** Web of Science Researcher ID: V-3621-2018
Google Scholar Id: YtGsc5AAAAAJ
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Orcid Id: [0000-0002-0256-6513/bhanuecvlsi@gmail.com](https://orcid.org/0000-0002-0256-6513/bhanuecvlsi@gmail.com)
NCS ID - J14J56-1012344268697
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<https://www.linkedin.com/in/dr-bhanu-pratap-singh-59833824>

EDUCATION:

Sept. 2021-Sept. 2023.

National Institute of Technology (NIT), Warangal India

PG Diploma in AIML: Completed from NIT Warangal.

- Python for AI-ML
- Machine Learning
- Predictive Analytics

Aug.2012-Feb.2017

Indian Institute of Technology (Indian School of Mines) Dhanbad India

Ph.D. (Awarded in Feb. 2017)

Dept.- Electronics Engineering

Guide- Prof. V. Kumar, IIT(ISM) Dhanbad

Aug.2008-Nov.2010

SGSITS Indore, India

M.Tech- Microelectronics & VLSI Design

Aug.2004-June2008

Samrat Ashok Technology Institute (SATI) Vidisha India

B.E.- Electronics & Communication Engineering

PROFESSIONAL/TEACHING EXPERIENCE:

April 2025 to Present

Associate Professor

ECE, SoS Engineering & Technology, Guru Ghasidas University (A Central University)
Bilaspur C.G.

Jan 2024 to March 2025

Associate Professor & Head

Electronics & Communication Engineering, Prestige Institute of Management & Research
(PIMR), Bhopal M.P.

Jan 2020 to Dec. 2023

Associate Professor

Electronics & Communication Engineering, Lakshmi Narain Institute of Technology (LNCT)
Bhopal M.P.

AREAS OF RESEARCH INTEREST:

- Computational work on 2D and 3D Semiconductors
- CMOS VLSI and FinFet Technology.
- Machine Learning
- Multiscale Simulation of Novel Alloys and Devices

TECHNICAL SKILLS:

- Skilled in Python, AIML
- Highly skilled in VLSI Design EDA Tools like Cadence, OrCad, Tanner, Xilinx: Verilog/VHDL, QCA Designer.
- Proficient in software like, MultiSim, MATLAB, Sci Lab, Origin etc.

ATTAINMENTS IN SPORTS/EXTRA-CURRICULAR ACTIVITIES:

- B-Certificate in NCC, TSC certificate in NCC
- Certificate of **National grade** in Cricket Tournament at school level and college level both.
- Former **Treasurer** as official post of OPTICA (formerly OSA) IIT(ISM) Student Chapter.
- Former **President** as official post of OPTICA (formerly OSA) IIT(ISM) ISM Student Chapter.

FELLOWSHIPS:

- Received fellowship from MHRD for Ph. D. research work during 2012 to 2016.
- Received fellowship from MHRD for M. Tech program during 2008 to 2010.

ACHIEVEMENTS, AWARD AND RECOGNITION:

- Presented a paper in International Conference “IONS Nanjing” **China**, 10-12 July (2015) **Received Grant** of Rs. 50000 from ISMAA, IIT(ISM) Dhanbad to attend this conference.
- **Received Certificate with memento** for the **Session Chair** in international conference on Soft Computing: Theories and Applications held on December 17-19, 2021 at IIIT Kota.
- **Sanction** a grant of Rs. 45000/ from **Madhya Pradesh Council of Science & Technology** for organizing workshop on “Intellectual Property rights and Publication Indexing” in session 2023-24.
- **Received Certificate with memento** for the **Session Chair** in international conference on 2nd Int. Conf. on VLSI & Microwave and Wireless Technologies, held on 17-18, May, 2024 at MMMUT Gorakhpur.

- **Received Grant** of 3.5 Lakh from AICTE ATAI Academy to organize a ATAI FDP from 30 sept. to 05 Oct., 2024 at PIMR Bhopal.
- **Received Travel Grant** from OPTICA to attend Career Accelerator Program held in dec. 9-11, 2024 at **Berlin, Germany**.
- **Form a New IEEE Student Branch in PIMR Bhopal in Dec. 2024.**

PUBLICATIONS:

A. Journals (SCI)

- [1]. V. Kumar, **Bhanu P. Singh** and Bramha P. Pandey “First-principle calculations of the elastic properties of $A^{II}B^{IV}C_2^V$ semiconductors” *Comput. Mater. Sci.*, 87 (2014) 227.
- [2]. V. Kumar, S. K. Tripathy, Vijeta Jha and **B. P. Singh** “Second harmonic generation properties of $A^{II}B^{IV}C_2^V$ chalcopyrite semiconductors” *Phys. Lett. A*, 378 (2014) 519–523
- [3]. V. Kumar, Anita Sinha, **B. P. Singh**, A. P. Sinha and V. Jha “Refractive index and electronic polarizability of ternary chalcopyrite semiconductors” *Chin. Phys. Lett.*, 32 (2015) 127701.
- [4]. V. Kumar, Anita Sinha, **B. P. Singh** and S. Chandra,” Second-order nonlinear optical susceptibilities of $A^{II}B^{VI}$ and $A^{III}B^V$ semiconductors” *Phys. Lett. A*, 380 (2016) 3630-3633.
- [5]. V. Kumar, **Bhanu P. Singh** and S. Chandra “Optical, elastic and thermal properties of ZB-AlN semiconductor from first-principle calculations” *Ind. J. Phys.* 91(4) (2017) 445-451.
- [6]. V. Kumar and **Bhanu P. Singh** “Structural and elastic properties of $A^IB^{III}C_2^{VI}$ semiconductors” *Ind. J. Phys.* 92(1) (2018) 29-35.
- [7]. Shailendra Singh Ojha, Sadhana Mishra, Bhupendra Dhakad & **Bhanu Pratap Singh**, “Dual-Wideband Rectenna for RF Energy Harvesting from 5G and WIMAX”, International Journal of Electronics, Aug. 2024, 1-18, Taylor & Francis

B. Other Journals

- [8]. Akhilesh Kumar, **Bhanu Pratap Singh** and Jyoti Athiya “Design and Noise Analysis of Biquad GIC Notch Filter in 0.18 μm CMOS Technology” IJAET Journal, vol. 1, Issue 3, July 2011, pp.138-144, turkey, IF-0.86
- [9]. Akhilesh Kumar, **Bhanu Pratap Singh** and Jyoti Athiya “Design of Low Power Low Noise Biquad GIC Notch Filter in 0.18 μm CMOS Technology” IJAET Journal, vol. 1, Issue 5, Nov 2011, pp.500-506, turkey
- [10]. **Bhanu Pratap Singh**, D. S. Ajnar and P. K. Jain “Low power high gain Folded-cascode CMOS Opamp with slew rate enhancement circuit for 100mW 10 bit 50 MS/s High speed ADC Designed in 0.18 μm CMOS Technology” IJCNS Journal, vol.2 No.8, August 2010.

C. Conference Publications

- [1]. **Bhanu Pratap Singh**, Jyoti Athiya and P. K. Jain “Design of Low Power Low Noise Biquad GIC Notch Filter in 0.18 μm CMOS Technology” CICN-IEEE Proceeding, Gwalior, Oct-2011.
- [2]. V. Kumar, **Bhanu P. Singh**, S. K. Tripathy “First-principles calculations of the elastic properties of ternary chalcopyrite semiconductors” ICMAP-IEEE Proceeding, IIT(ISM) Dhanbad, Dec-2013.
- [3]. **Bhanu P. Singh**, V. Kumar and S. K. Tripathy, First-principle calculations of optical and phonon properties of wurtzite gallium nitride, SLIET Longowal, Punjab, March 13-14, 2015. Advanced Materials and Radiation Physics (AMRP-2015): AIP Conference Proceedings 1675, 030046 (2015) ISSN: 0094-243X.,
- [4]. **Bhanu P. Singh** and V. Kumar, Optical and Phonon Properties of Zinc-Blende AlN from First-principle Calculations, 4th Int. Conf. CDAMOP, University of Delhi, Delhi, March 11- 14, (2015) 116.
- [5]. **Bhanu P. Singh** and V. Kumar “First-principle calculations of optical properties of zinc-blende indium nitride under pressure” IONS Nanjing Proceeding, **China**, 10-12 July (2015) 34.
- [6]. P. S. Gayathri, D. V. Satyanand, B. S. Kiran, T. N. Sravya, **Bhanu P. Singh** and V. Kumar, “Elastic properties of ZB III-Nitrides: A first-principles study”, IEEE Int. Conf. on Microwave and Photonic (ICMAP-2015), IIT(ISM), Dhanbad, Dec.11-13, 2015.
doi: 10.1109/ICMAP.2015.7408762.

- [7]. **Bhanu. P. Singh** and Prachi Parashar “Optical properties of ZB-InN by DFT” abstract id-2075, 21st National Symposium on Radiation Physics (NSRP-21), CAD Indore, March,5-7, 2018.
- [8]. **Bhanu P. Singh**, Prachi Parashar and Jyoti Athiya “Study of Cascode Current-Source Based Operational Transconductance Amplifier Using AMS 0.35 μ m Technology” National Conference on Recent Trends in Devices, Circuits and Communication, MMMUT Gorakhpur, April, 15-16, 2019.
- [9]. Kanchan Cecil, Meena Panchore and **Bhanu P. Singh** “Impact of High-K Dielectric on Charge Plasma based CPSB-JLT” Proceedings of International conference on Synthesis, Characterization & Applications of Emerging Materials with special reference to sustainable technologies” during 22-24 Feb. 2021.
- [10]. **Bhanu P. Singh** and Anand Agrawal, “ Design and Analysis of GIGA Fiber like Connectivity of 5G Technology Using 60 GHz Band, Proceedings of 7th International Conference on Soft Computing: Theories and Applications (SOCTA 2022), Springer, Singapore, Apr, 2023 pp 777–785, Part of the Lecture Notes in Networks and Systems bookseries (LNNS, volume 627), 25 April 2023. **SCOPUS**, https://doi.org/10.1007/978-981-19-9858-4_66.
- [11]. **Bhanu P. Singh**, S. P. Kori, Sourabh Pandey, Hari S. Shrivastav and Uma S. Kurmi, “Optical Properties Of Zink-Blende Indium Nitride Under Pressures Using Density Functinal Theory” 2nd Int. Conf. on VLSI & Microwave and Wireless Technologies, held on 17-18, May, 2024 at MMMUT Gorakhpur. **Accepted** in Lecture Notes in Electrical Engineering, Springer Nature, Scopus.

BOOKS/CHAPTERS PUBLISHED:

- **Book Chapter**, Bhanu P. Singh “Studies of Optical and Phonon Properties of Wurtzite Gallium Nitride: First-principle Calculations” Advanced Aspects of Engineering Research Vol. 15, 11 June 2021, Page 17-24. ISBN 978-93-91215-90-3, B. P. International
- **Book Chapter**, Bhanu P. Singh, Trishu Singh and Raju Narwade ‘Recent progress of fibre optic sensors for the structural health monitoring of civil infrastructure’ in Book ‘Sensors and Fiber Optics: Recent Trends’, Namya Press, New Delhi, Ed.1, January 2023, page 61-77. ISBN: 9789355451712

PATENTS FILED/PUBLISHED/GRANTED:

- [1] **Bhanu P. Singh**, Vivek Jain, S. P. Kori, Uma Shankar Kurmi and Arun Patel, “Framework for Enhancing the Performance of the Rail Industry Using Digitalization”, Application Ref Number-202221054436, Filing Date-22/09/2022 -Indian Patent Office, published on: 29/03/2024.
- [2] Shailendra Singh Ojha, Ranjeet Singh Tomar, Bhupendra Dhakad, Sadhana Mishra, Rachit Jain and **Bhanu Pratap Singh** “Triple Wideband Antenna for RF Energy Harvesting Applications” Appn No. 202321009683, Published on 17/03/2023. Filed: 20/02/2023.

INVITED TALKS/LECTURES:

- [1] **Delivered an Expert Talk** on “Publication of Faculty Research Work” in one day workshop, organized by LNCT Bhopal, held on 5th June 2018. (MPCOST)
- [2] **Delivered a keynote lecture** in FDP on 5G Mobile Communication, organized by LNCT Bhopal in association with RGPV, TEQIP-III Bhopal, held on 23-27, Sept. 2019.

NPTEL COURSE COMPLETION:

- [1] Digital Circuits-12 Week, Elite+Silver, 77%
- [2] Analog Circuit-8 Week, 75%

PROFESSIONAL BODIES MEMBERSHIP:

- Active member of OPTICA (formerly OSA) **Member No.: 1094731**
- Active member of Society of Photo-Optical Instrumentation Engineers (SPIE) **ID: 3722462**
- **IEEE Professional Senior Member**, *Membership No. 92847590*
- Life Fellow of Optical Society of India (OSI), Life Fellow Member: **L-756**

REVIEWER/COMMITTEE MEMBER:

- **Committee member**- Siegman International School on Lasers Review Committee
- **Reviewer**- OSA, J. Nanoelectronics & Optoelectronics, SCI Journal, Elsevier
- **Reviewer**- Computational Material Science, SCI Journal, Elsevier
- **Received** OSA reviewer certification course on 25 July, 2020.
- **Received** an appreciation certificate to **review the articles** in international conference on VLSI and microwave and wireless technology-2021, organized by MMMUT Gorakhpur during March, 20-21, 2021.
- **Received** an appreciation certificate to **review the articles** in international conference on Soft Computing: Theories and Applications held on December 17-19, 2021 at IIIT Kota.

WORKSHOPS/FDPs/OTHERS:

- [1] **Organized** an international conference “**IONS Dhanbad 2016**” held on Sept. 7-10, 2016 at IIT(ISM) Dhanbad, sponsored by OSA and ISM OSA student chapter.
- [2] **Organized** a “Recent Trend in Photonics Technology (RTPT 2015),” in the Electronics Department at Indian School of Mines, Dhanbad on 21th -22th August 2015, sponsored by ISM OSA Student Chapter.
- [3] **Organized** “Recent Trend in Photonics Technology (RTPT 2014),” in the Electronics Department at Indian School of Mines, Dhanbad on 4th -5th April 2014, sponsored by ISM OSA Student Chapter.
- [4] **Attended** an international workshop on “**Electronic Materials Technology**”, organized by Crystal Growth Center, Anna University Chennai India, held on March 2014.
- [5] **Attended** one-week Faculty Development Program on “**Material Characterization**”, organized by Department of Nano Technology, RGPV Bhopal in (20-25), Nov. 2017.
- [6] **Organized and attended** one-week Faculty Development Program on “CAD Based Learning Methodologies for Electronic Design Automation” from 12-16, March 2018 organized by LNCT Bhopal. (MPCOST)
- [7] **Attended** 9th INUP Familiarization Workshop on Nanofabrication Technologies, held at **IIT Bombay**, Mumbai during May 23-25, 2018.
- [8] **Attended** one-week Faculty Development Program on “Coding Theory & its Applications” from 13-17, June 2019, organized by RGPV Bhopal (TEQIP-III)
- [9] **Organized** a National Conference(online) as an organizing secretary, “emerging trends and innovations in electronics technology” held on 30 April, 2020 at dept. of electronics & Commn. LNCT Bhopal.
- [10] **Organized** a webinar on Fostering Innovation & Entrepreneurship in India: Our Incubation Centers by **Dr. Vijeta Jha**, Techno-IPR Consultant, Samvad Partners Chennai on 12th June 2020 at LNCT Bhopal.
- [11] **Proctor Coordinator** in **FDP** on “Demystifying 5G RF ASICs”, jointly organized by Electronics and ICT academies held from 24 Aug. to 04 Sept. 2020 under Meity, Govt. of India.
- [12] **Attended** virtual conference on laser and electro-optics (**CLEO**) held from 11-15, May 2020, sponsored by APS, IEEE photonics society and OSA.
- [13] **Attended** virtual 2020 Advanced Photonics Congress held from 13-16, July 2020, sponsored by OSA.
- [14] **Attended**, AICTE sponsored short term training program (**STTP**) on computational techniques held on 02-07, Nov. 2020, organized by SIRT Bhopal.
- [15] **Attended** AICTE Training and Learning (**ATAL**) Academy Online FDP on "Photonics" from 2020-11-3 to 2020-11-7 at Indian Institute of Information Technology Ranchi.
- [16] **Attended** AICTE Training and Learning (**ATAL**) Academy Online **FDP** on "Computer Science & Biology" from 2020-12-15 to 2020-12-19 at Lakshmi Narain College of Technology.
- [17] **Attended** one week **FDP** on Virtual Lab: Electronics and Communication Engineering

- (VLECE-2020) held during October 12 - 16, 2020 organized by MMMUT Gorakhpur (sponsored by TEQIP-III).
- [18] **Attended** five days online FDP on “Emerging Trends in RF and Energy Device and Circuits” organized by the Department of Electronics and Communication Engineering at NIT Meghalaya from 22nd Feb to 26th Feb, 2021.
 - [19] **Conducted** a expert talk on “mmWave Communication: Future of Wireless Communication” by **Dr. Anand Agrawal, IIT Kota**, held on 1 April, 2021.
 - [20] **Attended**, International E-Conference on emerging trends and innovations in technology, organized by RIPHAH international University Pakistan held on 9-11, April 2021.
 - [21] **Conducted** expert talk on “Indian Space Revolution and Future Opportunities” by **Dr. Nitesh Kumar Agrawal**, Indian Institute of Space Science and Technology Thiruvananthapuram, Kerala, held on 28 April, 2021.
 - [22] **Attended** one week online Short-Term Training Program on “Emerging Nanoscale Devices, Circuits and Its Applications (NANODC-21)” held from 10-14 May, 2021 organized by Delhi Technological University, Delhi, India.
 - [23] **Conducted** expert talk on “An Overview of Intellectual Property Rights & Patenting” by Dr. Vijeta Jha, Techno-IPR Consultant, Samvad Partners Chennai held on 04 Oct. 2021.
 - [24] **Presented a poster on** “Implementation of Quantum Combinational Circuits Using XOR-AND Reduction Techniques”, in Madhya Pradesh Vigyan Sammelan and Expo (MPVS-2021) during December 22-25, 2021, organized by IIT Indore.
 - [25] **Organized** Orientation Program of IEEE LNCT Student Branch on 20 May 2023 in the presence of guest Mr. Shubham Gupta, SAC Chair IEEE MP Section.
 - [26] **Organized** a National Conference as an organizing Coordinator/secretary, “Recent Advances in Electronics Engineering and Technology” held on 30th June-1st July, 2023 at dept. of Electronics & Commn. LNCT Bhopal.
 - [27] **Organized as a Co-coordinator** PIMR Ist Int. Conference on “Effects of Technological Change in Green Growth ”, June 14-15, 2024 at PIMR Bhopal Campus.
 - [28] **Organized** ATAL FDP on Emerging Trends and challenges on Semiconductor Technologies for next generation, Sept 30- Oct 5, 2024 at PIMR Bhopal.
 - [29] Form a New IEEE Student Branch in PIMR Bhopal in Dec. 2024.

CAMPUS INVOLVEMENT/COMMUNITY SERVICE:

- [1] **Ex-Branch Counselor** in Prestige IEEE Student Branch
- [2] **Ex-Branch Counselor** in IEEE LNCT Student Branch
- [3] Active involvement as a mentor to provide guidance and disciplined information to the students.
- [4] Member of National Advisory Board in Soft Computing: Theory and Application (SoCTA) http://socta.in/socta2021/organizing_committees.php
- [5] Technical Program **Committee Member**- EAI IC4S 2023 - 4th EAI International Conference on Cognitive Computing and Cyber Physical Systems, <https://ic4s-conference.eai-conferences.org/2023/technical-program-committee/>

Declaration:

I hereby declare that the above is true to the best of my knowledge.