

# Dr. Baseerat Gul

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## **Online Research profile:**

- Orcid ID: <https://orcid.org/0000-0003-4924-4017>
  - Web of Science ResearcherID: **IVV-0768-2023**  
(<https://www.webofscience.com/wos/author/rid/IVV-0768-2023>)
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## **Objective:**

*An accomplished and research-driven Ph.D. holder in Optical Communication with specialized expertise in Optical long-haul networks and Wavelength Division Multiplexing (WDM) systems, poised to contribute significantly within the teaching field while nurturing academic growth and innovation.*

## **Education:**

- **HSC (XII)** – 2008, from IMI Girls, Bemina, Srinagar.
- **B.Tech** in Electronics and Communication Engineering, from Islamic University of Science and Technology, Awantipora, J&K (CGPA: 8.56), in 2013.
- **M.Tech** in Digital Communication, from Rajasthan Technical University, Kota.
- **Ph.D.** in Optical Communication (Specialization in Optical long-haul networks and WDM systems), from Islamic University of Science and Technology, Awantipora, J&K, in 2024.

## **Teaching Experience:**

- As **Assistant professor (contractual)** in Dept. of ECE, SSM college of Engineering, J&K: from July 2014 to July 2015.
- As **Assistant professor (contractual)** in Dept. of ECE, SSM college of Engineering, J&K: from June 2017 to August 2020.
- As **Assistant professor (contractual)** in Dept. of Electronics and Instrumentation technology, University of Kashmir, J&K: from March 2024 to present.

## **Achievements:**

- Qualified **Graduate Aptitude Test in Engineering (GATE)** - 2014.
- **Certificate of Appreciation** for extending the support in organizing the WORLD SPACE WEEK in SSM college of Engg., by **Dept. of Ecology, Environment & Remote Sensing, Govt. of J&K**, on 10<sup>th</sup> oct 2018.
- Qualified **UGC-NET** - 2019.
- **Certificate of Appreciation** for the research work presented at **ICWSNUCA-2021**.

## Publications:

- "Review of FBG and DCF as dispersion management unit for long haul optical links and WDM systems, "**Optical and quantum electronics, Springer**, Vol 55, article no. 557, Springer, (2023), **SCI (IMPACT FACTOR=3)**.
- "Fiber Bragg grating as a sole dispersion compensation unit for a long haul optical link," **Photonic Network Communications, Springer**, Vol 46, no. 2 (2023): 68-77, **SCI (IMPACT FACTOR=1.7)**.
- "1.28 Tbps DWDM optical network design using a dispersion compensating distributed Raman amplifier over S-band, "**Opto-Electronics Review, PAS** (2023): e146104-e146104, **SCI (IMPACT FACTOR=1.6)**.
- "Cost-Effective Dispersion Compensator for Ultra-Long-Haul Optical Networks," **National Academy Science Letters, Springer** (2023): 1-4, **SCI (IMPACT FACTOR=1.1)**.
- "Dispersion Compensation and Demultiplexing Using a Cascaded CFBG Structure in a 150 km Long DWDM Optical Network," **Chinese Journal of Electronics, Wiley**, 33 (2023): 1-9, **SCI (IMPACT FACTOR=1.3)**.
- "Design and performance investigation of Gaussian apodized FBG as a hybrid dispersion compensation module for a long-haul optical link," **Journal of Optical Communications, De Gruyter**, (2022), (**SCOPUS**)
- "Enabling Ultra-High Bit Rate Transmission with CFBG as Dispersion Compensator in an OptiSpan 240km DWDM Network," **Journal of Optical Communications, De Gruyter**, (2024), (**SCOPUS**)
- "Comparative performance analysis of tanh-apodized fiber Bragg grating and Gaussian-apodized fiber Bragg grating as a hybrid dispersion compensation model," In **IoT and Analytics for Sensor Networks: Proceedings of ICWSNUCA 2021**, pp. 71-82. Springer Singapore, 2022.
- "Multistage Amplified and Dispersion Compensated Ultra-long Haul DWDM Link with High OSNR," In 2022 Fourth International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT), pp. 1-4. **IEEE**, 2022.
- A survey on diverse dispersion compensation techniques in rof systems", **International Journal of Emerging Technologies and Innovative Research**, Vol.5, Issue 8, page no.1041-1044, August-2018.
- Performance analysis of cost effective dispersion compensation joint module in rof systems. "**International Journal of Emerging Technologies and Innovative Research**, Vol.5, Issue 8, page no.814-819, August-2018.

## Training and Workshop:

- Participated in a one-day workshop on "**Promoting Innovations in Individuals, Start-ups and Micro, Small & Medium Enterprises (PRISM) and Technopreneurship Promotion Programme (TePP) Sensitization**", organized by TePP Outreach Center (TUC), USIC, University of Kashmir, in collaboration with the Mechanical Engineering Department, **NIT Srinagar, on October 13, 2012**, held at NIT Srinagar
- Undertook four weeks of Industrial Training at **Bharat Sanchar Nigam Limited (BSNL)**, Srinagar, focusing on telecommunications systems, troubleshooting, and network infrastructure.
- Coordinated the workshop on "**Autonomous Robotics & Embedded Systems**", conducted by GeeksLab Technologies Pvt. Ltd. In association with **AIESEC-IIT Delhi**, at SSM college of Engineering and Technology, on **19<sup>th</sup> and 20<sup>th</sup> of May 2015**.

- Coordinated the program of “**WORLD SPACE WEEK**”, conducted by the **Department of Ecology, Environment & Remote Sensing, Govt. of J&K**, at SSM college of Engineering and Technology, from **October 4 to 10<sup>th</sup> 2018**.
- Participated in **one week Faculty Development Program** on “**Recent trends in Electronics and Communication Engineering**”, organized by Dept of ECE, JB institute of Engg. & Technology, from **26<sup>th</sup> April to 2<sup>nd</sup> May, 2020**.
- Successfully participated in the **National Intellectual Property Awareness Training Program** as part of the National IP Festival **organized by O/o CGPDTM and CSIR** under Azadi Ka Amrit Mahotsav, certified by the Islamic University of Science and Technology, from **1st to 31st July, 2023**.

#### **Skills:**

- Document Formatting and Editing: Advanced proficiency in MS Visio, MS Excel, MS Word, including TOC, TOA, Cross-referencing, etc.
- Microsoft Office: Skilled in creating, editing, and troubleshooting PowerPoint and Excel documents.
- Communication Systems Design: Expertise in designing and implementing communication system networks.
- Research and Academic Writing: Proven track record of publications in reputable journals.
- Interpersonal Skills: Strong communication and interpersonal skills developed through academic and professional experiences.

#### **Projects:**

- Designed and developed "Blind Man's Stick," a microcontroller-based project during B.Tech, serving as an electronic aid for the visually impaired.
- Guided UG-level students in the field of Robotics and Optical Fiber Communication at SSM College of Engineering.
- Organized multiple workshops in the college during my tenure.

#### **Subjects Taught (UG-level):**

- Optical Fiber Communication.
- VLSI.
- Analog Communications.
- Digital Communications.
- Analog and Digital Electronics.
- Computer organization and Architecture.

#### **Technical Software skills:**

- VHDL.
- OptiSystem.
- Multisim circuit simulation.
- LaTeX.

#### **Research Interests:**

WDM Systems, Free Space Optical Networks, Long-Haul optical Links, Optical Amplifiers, Dispersion Management Techniques.

**References:** Available upon request.