CURRICULUM VITAE DR. SRUTHI PRASOOD USHA KUMARI

PERSONAL INFORMATION

Date / place of birth / Gender:	11.09.1988, India (Kerala), Female
Family status:	Married, 1 child (born 11/2018)

Private address
Holtenauer Str. 105
24105 Kiel, Germany
+49-(0)15510768424
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Institute of Materials Science, Faculty of Engineering
Christian-Albrechts-Universität zu Kiel / Kiel University
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SHORT PROFILE

- Humboldt Postdoctoral Fellow and Research Scientist
- PhD in Sensors Development, specialization in Applied Optics and Materials Engineering, background in Optoelectronics and Laser Technology
- Project PI, Supervisor & Mentor for Masters', PhD students, and Research Assistants
- Member of OPTICA (The Optical Society of America), European Respiratory Society (ERS), International Association of Breath Research (IABR), Kiel Nano, Surface and Interface Science (KiNSIS) and Kiel Life Science (KLS)
- Fiber Optics, Sensor Engineering, Plasmonics and Photonics, Nano-engineered and Bioinspired Materials, Immunoassays and Surface Functionalization Chemistry, Setting up Laboratory

PROFESSIONAL CAREER

Since Feb/2024	Humboldt Postdoctoral Fellow, Bioinspired Materials and Biosensor Technology, Institute of Materials Science, Faculty of Engineering, Kiel University, Kiel, Germany
Feb/2023 – Oct/2023	Research Scientist, Bioinspired Materials and Biosensor Technology & Integrated Systems and Photonics, Faculty of Engineering, Kiel University, Kiel, Germany
	08/2021 – 01/2023 parental leave and relocation
May/2021 – Aug/2021	Senior Project Scientist, Applied Mechanics and Biomedical Engineering, Indian Institute of Technology Madras, Chennai, India
May/2019 – April/2021	National Postdoctoral Fellow, Applied Mechanics and Biomedical Engineering, Indian Institute of Technology Madras, Chennai, India
	09/2018 – 04/2019 Maternity leave
May/2018 – Sept/2018	Postdoctoral Research Fellow, Applied Mechanics and Biomedical Engineering, Indian Institute of Technology Madras, Chennai, India

QUALIFICATIONS

November/2018	PhD at the Department of Physics, Indian Institute of Technology Delhi, New Delhi, India
	Topic of the dissertation: Surface Plasmon and Lossy Mode Resonance based Fiber Optic Chemical and Biosensors Utilizing Zinc Oxide Supervisor: Prof. Dr. Banshi Dhar Gupta

June/2011 – June/2013	Master of Technology at the International School of Photonics Cochin University of Science and Technology, Cochin, Kerala, India
	Topic of the dissertation: Digital Holography and its Applications for the Measurement of Temperature of Gaseous Flames Supervisor: Prof. Dr. Chandra Shakher Industrial Research and Development Center Indian Institute of Technology Delhi, New Delhi, India
June/2006 – April/2010	Bachelor of Technology at the Kerala University, Kerala, India

AWARDS, SCHOLARSHIPS, INTERNAL GRANTS

November/2024	Early Career Award, KiNSIS, Kiel University (5000 €)
October/2024	CAU Advance Award, Grant approval for project proposal preparation for third-party funding in 2025, research committee of Kiel University (20000 €)
November/2023	Humboldt Fellowship for Postdoctoral Research, Alexander von Humboldt Foundation, Germany (90,000 € / 2 years)
December/2022	Science and Engineering Research Board – American Chemical Society Research Competition Award, India
October/2019	Shri Jaidutt Shrimati Saraswati Sodha Research Award for the best doctoral thesis for the session 2018 - 2019, Indian Institute of Technology Delhi, India
February/2019	National Postdoctoral Research Fellowship (NPDF) Award for Research, Science and Engineering Research Board (SERB) of the Department of Science & Technology, Government of India, 2019 (23 lakhs INR)
April/2018	Institute Postdoctoral Award, Indian Institute of Technology Madras, India
August/2016	Travel grant from the Department of Science and Technology, Government of India for presenting research in the Australian Conference on Optical Fiber Technology (ACOFT), Australia
January/2016	Senior Research Fellowship for Doctoral Research, Indian Institute of Technology Delhi, India
August/2015	Travel grant from the Japan Society of Applied Physics (JSAP) and the Optica (OSA) to deliver the talk in the joint symposia, Japan
January/2014	Junior Research Fellowship for Doctoral Research, Indian Institute of Technology Delhi, India
June/2013	Second Rank in Master of Technology, Cochin University of Science and Technology, India
June//2012	Project Assistant Scholarship for Industrial Research and Development to pursue one-year Master thesis research from the Indian Institute of Technology Delhi, India
March/2021	Graduate Aptitude Test in Entrance Examination (GATE), Nation Wide Entrance Examination for Qualifying Engineering Graduates for Master of Technology Program, India

SHORTLISTING

2020 Shortlisted (2nd place), Scientist C (eqvt to Associate Professor), Indian Institute of Science & Technology Mohali, India

ACADEMIC SERVICES: COMMITTEES, REVIEWS, CONFERENCES

Reviews for journals from Springer Nature, Elsevier, IEEE, Royal Society of Chemistry, IOP, MDPI

Guest Editor for Special Issues :

- *Discover Nano (Springer Nature – Nano-Engineered Materials, ongoing)*
  Issue: *Nano-engineered Materials for Biosensing, Energy Systems, Environmental Monitoring and Remediation: Synthesis and Applications*

- *Biosensors (MDPI – Fiber Optic Biosensors, ongoing)*
  Issue: *Fiber Optic Biosensors: Advancements and Applications*

Co-Chair for Sensors and Sensor Systems in Conferences, Resource Speaker – Faculty Development Program

THIRD-PARTY FUNDINGS

Current projects: Breaking Frontiers for the Prediction of Wheeze Prognosis in Children through the Development of a Smart Fiber Optic Chemo-Sensor Platform for In-Home Breath Profiling, Alexander von Humboldt Foundation – Postdoctoral Fellowship, Applicant and PI (Feb 2024 - on going)

Completed Projects: Development of A Lossy Mode Resonance Based Fiber Optic Biosensor Array Platform for Ochratoxin-A Detection In Foods, Science and Engineering Research Board, Department of Science and Technology, Government of India – National Postdoctoral Fellowship, Applicant and PI (May 2019 – April 2021)

Proposal under consideration: Gut-Endocrine-bone axes: Multi-omic studies to develop of a low-cost nano-photonic-plasmonic sensor for non-invasive point-of-care triage and timely tracing of silent osteoporotic fracture risk At Home, ERC Synergy Grant, Applicant and one among the main PIs (submitted in November 2025)

Participation in third-party funding: Synergistic Design of Bio-Inspired Functional Nano-Carriers for Cystic Fibrosis, ERC Consolidator Grant, Participation in formulating the idea and writing 50% of the proposal and application documents, with the Applicant.

TEACHING DIRECTORY

Supervision of master's research and theses and co-supervision of Ph.D

1. Jain Jacob, Mater Thesis Supervisor, "Lab-on-tip fiber optic breath sensor and AI based signal analysis and prediction", Co-supervision: Peer Kröger, December 2025 - Present, Kiel University

2. Midhun Mohanan, Research Supervisor, "Fiber Optic VOC sensor system development", July 2025 - Present, Kiel University

3. Jithin John, Research Supervisor, "Self-supporting fiber integrated optoelectronic system for sensing", July 2025 - Present, Kiel University

4. Hamza Rizvi, S.M., Master Lab Project Supervisor, "Nanozyme-COF core-shell for soil nitrate

quantification", March - June 2025, Kiel University

5. Danish Hussain, Research Internship Supervisor, "Synthesis and analysis of enzyme mimics for colorimetric sensing", March 2025 - Present, Kiel University

6. Midhun Mohanan, Master Lab Project, Supervisor, "Ion imprinted polymer as receptor material for nitrate ion detection", Jan - April 2024, Kiel University

7. Patrick Djonwouo, Master Semester Project, Supervisor, "Fibre optic biosensor for wheeze analysis", May - July 2024, Kiel University

8. Sweta Menon, Doctoral Thesis, Co-supervisor for a thesis chapter – "Plasmonic fiber optic absorbance sensor for environmental chromium ion detection using MOF", May 2019 - Aug 2021, currently ORISE post-doctoral researcher at NETL, USA, Main Supervisor: Prof. V.V. R. Sai

Invited/Collaboration Talks, Courses and Further training in university didactics (up to 5)

July - Sept/2025	IABR 2025 Talk on Advancing Fiber Optic Sensor Plattform for Breathomics And Environmental Health, Session on Sensors & Sensor Systems University of Innsbruck, Austria
2014 - 2017	Kiel University – University of Minnesota Workshop on Collaboration Talk on Fiber Sensors in Session on Biomedical/Life Science Applications Indian Institute of Technology Delhi
August/2023 - Present	Research training and Supervision of Assistants for the EIC project, "SOILMONITOR" on the chemical colorimetric assay synthesis, quantification, and its spectroscopic and colorimetric analysis.
2023 - Present	Lecture & Laboratory classes on Fiber Optics, Optical Biosensors & Colorimetric Sensors, as part of Course 1: Bioinspired Materials & Molecular Modelling, Course II: Biosensors Technology, Faculty of Engineering, Kiel University
August/2023	Resource Speaker, Summer School 2023, Materials Science & Engineering, Kiel University
2016 - 2021	Semester (2)/Bachelor (4) -/Master (2) -/PhD-thesis (2) Project co-supervision Indian Institute of Technology Delhi & Indian Institute of Technology Madras
2014 - 2017	Teaching Assistant in Engineering Physics, Bachelor of Technology - Ist year, IInd year and IIIrd year Lectures and Laboratory courses, Indian Institute of Technology Delhi

PUBLICATION RECORD

https://orcid.org/ 0000-0002-4335-535X ; Original peer-reviewed research papers published: 19
Google Scholar (h-index : 19 ; citations : 1348 ; i10-index : 20)
Web of Science (h-index : 17 ; sum of times cited : 1008)
Scopus ID: 56304989700 (h-index : 18 ; citations : 1188)

Other types of publication organs:
Patents: 1 Granted, 2 filed ; Books and Chapters : 4 ; Conference Talks and Proceedings: 18

Relevant Books

1. Banshi D. Gupta, Anand M. Shrivastav, **Sruthi P. Usha,** "Optical Sensors for Biomedical Diagnostics and Environmental Monitoring" CRC Press, Taylor & Francis Group, November 2017.

2. Nastasia S. Moldovean-Cioroianu, **Sruthi P. Usha,** Zeynep Altintas, "Affinity Materials: From Natural Recognition Elements to Synthetic Counterparts. In: Molecularly Imprinted Polymers. Springer Series on Polymer and Composite Materials. Springer, November 2024.

3. **Sruthi P. Usha**, Shailendra K. Saxena, Subhojyoti Sinha, Anand M. Shrivastav, "Zinc Oxide – Based Lossy Mode Resonance Sensors: Principle and Applications". In: Advanced Photonic Devices for Energy and Sensing Applications. CRC Press, Taylor and Francis Group, Upcoming 2025.

4. Haipeng Li, **Sruthi P. Usha**, Anand M. Shrivastav, "Tunable Plasmonic Resonance for SERS Applications". In: Plasmonic Biosensors – Design and Applications. Springer, Upcoming 2025.

Patents

1. **Sruthi P. Usha,** Hariharan Manoharan, V.V.R. Sai, "Fiber Optic Biosensor for Ultra-Low Trace Analyte Detection", Indian Patent Application No. 202141062168, filed 31st Dec 2021, Granted 25th Sep 2024, Indian Patent No. 551004.

2. **Sruthi P. Usha,** Hariharan Manoharan, V.V.R. Sai, "Fiber Optic Biosensor for Ultra-Low Trace Analyte Detection", PCT Application No. PCT/IN2023/05003, filed 2nd Jan 2023, Published 6th July 2023.

3. **Sruthi P. Usha,** Hariharan Manoharan, V.V.R. Sai, "Fiber Optic Biosensor for Ultra-Low Trace Analyte Detection", USA Application No. 18/725,074, Published 27th March 2025.

Research Articles published in International Journals

Pause to set up fiber optics lab in 2024. Temporary research breaks due to parental leave & relocation in 2021 - 2023

1. **Sruthi P. Usha**, Hariharan Manoharan, Rehan Deshmukh, Ruslan Alvarez, Enric Calucho, V.V.R. Sai and Arben Merkoci, "Attomolar Analyte Sensing Techniques (AttoSens): A Review on a Decade of Progress in Chemical and Bio Sensing Nanoplatforms", Chemical Society Reviews, 50, 13012-13089 (2021).

2. **Sruthi P. Usha** and Banshi D. Gupta, "Urinary p-cresol diagnosis using nanocomposite of ZnO/MoS_2 and molecular imprinted polymer on optical fiber based LMR sensor", Biosensors and Bioelectronics, **101**, 135-145 (2018).

3. **Sruthi P. Usha**, Anand M. Shrivastav and Banshi D. Gupta, "Semiconductor metal oxide/polymer based fiber optic lossy mode resonance sensors: A contemporary study", Optical Fiber Technology 45, 146-166 (2018).

4. **Sruthi P. Usha**, Anand M. Shrivastav and Banshi D. Gupta, "A contemporary approach for design and characterization of fiber-optic-cortisol sensor tailoring LMR and ZnO/PPY molecularly imprinted film", Biosensors and Bioelectronics **87**, 178-186 (2017).

5. **Sruthi P. Usha**, Anand M. Shrivastav and Banshi D. Gupta, "Silver nanoparticle noduled ZnO nanowedge fetched novel FO-LMR based H_2O_2 biosensor: A twin regime sensor for in-vivo applications and H_2O_2 generation analysis from polyphenolic daily devouring beverages", Sensors and Actuators B **241**, 129-145 (2017).

6. **Sruthi P. Usha** and Banshi D. Gupta, "Performance analysis of zinc oxide implemented lossy mode resonance based optical fiber refractive index sensor utilizing thin film/nanostructure", Applied Optics, **56**, 5716-5725 (2017).

7. Swetha Menon, **Sruthi P. Usha,** Hariharan Manoharan, P.V.N Kishore, and V.V.R. Sai, "Metal-organic frameworks based fiber optic sensor for Cr(VI) detection", ACS Sensors, **8**, 684-693 (2023).

8. Sonika Sharma, **Sruthi P. Usha**, Anand M. Shrivastav and Banshi D. Gupta, "A novel method of SPR based SnO_2: GNP nano-hybrid optical fiber platform for hexachlorobenzene sensing", Sensors and Actuators B **246**, 927-936 (2017).

9. Anjli Baniyan, **Sruthi P. Usha**, Banshi D. Gupta, Rani Gupta and Enakshi K. Sharma, "Localized surface plasmon resonance-based sensor for the detection of triacylglycerides using silver nanoparticles", Journal of Biomedical Optics **22**, 107001 (2017).

10. Johana Ng Chen, Gauri Kishore Hasabnis, Eda Akin, Guiyang Gao, **Sruthi P. Usha**, Rederich Süssmuth and Zeynep Altintas, "Developing innovative point-of-care electrochemical sensors empowered by cardiac troponin-I nanocomposite materials", Sensors and Actuators B **417**, 136052 (2024).

11. Anand M. Shrivastav, **Sruthi P. Usha**, and Banshi D. Gupta, "Highly sensitive and selective erythromycin nanosensor employing fiber optic SPR/ERY imprinted nanostructure: Application in milk and honey", Biosensors and Bioelectronics **90**, 516-524 (2017).

12. **Sruthi P. Usha**, Anand M. Shrivastav, and Banshi D. Gupta, "FO-SPR based dextrose sensor using Ag/ZnO nanorods/ GOx for insulinoma detection", Biosensors and Bioelectronics **85**, 986-995 (2016).

13. Anand M. Shrivastav, **Sruthi P. Usha** and Banshi D. Gupta, "Fiber optic profenofos sensor based on surface plasmon resonance technique and molecular imprinting", Biosensors and Bioelectronics **79**, 150-157 (2016).

14. Anand M. Shrivastav, **Sruthi P. Usha** and Banshi D. Gupta**,** "A localized and propagating SPR, and molecular imprinting based fiber-optic ascorbic acid sensor using an in situ polymerized polyaniline-Ag nanocomposite", Nanotechnology **27**, 345501 (2016).

15. Satyendra K. Mishra, **Sruthi P. Usha** and Banshi D. Gupta, "A lossy mode resonance based fiber optic hydrogen gas sensor for room temperature using coatings of ITO thin film and nanoparticles", Measurement Science and Technology **27**, 045103 (2016).

16. Banshi D. Gupta, Anand M. Shrivastav and **Sruthi P. Usha,** "Surface plasmon resonance- based fiber optic sensors utilizing molecular imprinting", Sensors **16**, 1381 (2016).

17. **Sruthi P. Usha**, Satyendra K. Mishra and Banshi D. Gupta, "Fiber optic hydrogen sulfide gas sensors utilizing ZnO thin film/ZnO nanoparticles: a comparison of surface plasmon resonance and lossy mode resonance", Sensors and Actuators B **218**, 196-204 (2015).

18. **Sruthi P. Usha**, Satyendra K. Mishra and Banshi D. Gupta, "Fabrication and characterization of a SPR based fiber optic sensor for the detection of chlorine gas using silver and zinc oxide", Materials **8**, 2204-2216 (2015).

19. **Sruthi P. Usha**, Satyendra K. Mishra and Banshi D. Gupta, "Zinc oxide thin film/nanorods based lossy mode resonance hydrogen sulphide gas sensor", Materials Research Express **2**, 095003 (2015).

Research Articles Under Review and to be Communicated

20. Pritam Sukul, Anna Ritcher, Praveen Vasudevan, **Sruthi P. Usha**, Robert David and Daniel A. Reuter, "On human metabolic origin of isoprene: historical puzzles, breakthrough anecdotes and biomarker fate from earth to space", (2025) [Submitted to Cell Reports Physical Sciences]

21. Karishma Murali, Datchayani Murugan, Ravi Pathak, Ankit Chauhan, Sandeep Munjal, **Sruthi P. Usha***, and Anand M. Shrivastav*, "Forensic Detection: A Comprehensive review of SERS Mechanisms and Applications", (2026) [Submitted to ACS Applied Optical Materials]

22. Naveen Ilango, Akila Chitravel, Midhun Mohanan, Jithin John, Satish Lakkakula, **Sruthi P. Usha*** and Anand M. Shrivastav*, "Reflective Tapered Fiber Optic SPR probe for MOF active gas sensing", (2025), [To be Communicated]

23. **Sruthi P. Usha***, Hariharan Manoharan, Swetha Menon, Sourav Dutta and V.V.R. Sai*, "Label-free Plasmonic Fiber-Optic Absorbance Biosensor with Metal Organic Framework based Bioreceptor Encapsulation Strategy for Ultra-Trace Level Detection of Ochratoxin-A", (2026) [To be Communicated].

24. **Sruthi P. Usha**, Mattis Neubauer, Midhun Mohanan, Eda Akin, Gauri Hasabnis and Zeynep Altintas, "Colorimetric AuNPs@ZIF-8@COF core-shell-shell for nitrate detection", (2026). [To be Communicated]

25. **Sruthi P. Usha**, Mattis Neubauer, Midhun Mohanan, Eda Akin and Zeynep Altintas, "On-site nitrate detection in soil water utilizing colorimetric ion imprinted polymer sensor using nanozymes", (2026). [To be Communicated]

Research Articles published in Conference Proceedings

1. **Sruthi P. Usha,** Midhun Mohanan, Jithin John, "Advancing fiber optic sensor platforms for breathomics and environmental health", International Association of Breath Research 2025 Conference (Innsbruck, Austria), Sep 14-19, (2025).

2. Eda Akin, **Sruthi P. Usha,** Mattis Neubauer, Zeynep Altintas, "Nanozymatic yolk-shell covalent organic framework on metal-organic framework for colorimetric nitrate detection", 8th International Conference on Bio-Sensing Technology (Seville, Spain), May 12-15, (2024).

3. **Sruthi P. Usha**, Gauri Hasabnis, Zeynep Altintas, "Facile Synthesis of Water-Soluble AuNPs@ZIF-8 with Tunable Nanozyme Activity: A Stabilizer-Free Composite Catalyst for Biomarker Detection," 33rd Anniversary World Congress on Biosensors, Busan (South Korea) June 5-8, (2023).

4. **Sruthi P. Usha**, Gauri Hasabnis, Zeynep Altintas. "Water-Soluble AuNPs@ZIF-8 Composite with Tunable Nanozyme Activity for Biomarker Detection," Nanotechnology and Innovation in the Baltic Sea Region (NIBS), Sonderborg (Denmark) July 3-5, (2023).

5. N. T. Venkat, Swetha Menon, Murugan Divagar, A. Gowri, **Sruthi P. Usha** and V.V.R. Sai, "Silica and polymeric fiber optic refractometeric sensor probes: Performance evaluation", WRAP, Mumbai (India), March 4-6, (2022) 1-2.

6. Anjali Baniyan, **Sruthi P. Usha**, Banshi D. Gupta and Enakshi K. Sharma, "Surface plasmon resonance based fiber optic sensor for the detection of triacylglycerides utilizing Ag/ZnO nanorods/lipase enzyme,", International Society for Optics and Photonics - In Plasmonics in Biology and Medicine XV, San Francisco (USA) **10509**, March (2018) 105090J.

7. Banshi D. Gupta, **Sruthi P. Usha** and Anand M. Shrivastav, "A novel approach of LMR/MIP based optical fiber probe as salivary cortisol sensor", CLEO-2016, San Jose (USA), June 5-10, (2016) JTu5A.145.

8. Banshi D. Gupta, Anand M. Shrivastav and **Sruthi P. Usha**, "Fiber optic SPR nanosensor for erythromycin detection using molecularly imprinted nanoparticles", CLEO-2016, San Jose (USA), June 5-10 (2016) SM4P.7.

9. **Sruthi P. Usha**, Anand M. Shrivastav and Banshi D. Gupta, "LMR based hydrogen peroxide sensor using ZnO/Ag nanostructures", Australian Conference on Optical Fiber Technology, Sydney (Australia), September 5-8 (2016) AT3C.4.

10. Anand M. Shrivastav, **Sruthi P. Usha** and Banshi D. Gupta, "SPR and molecular imprinting based fiber optic sensor for copper ion detection", Australian Conference on Optical Fiber Technology, Sydney (Australia), September 5-8, (2016) AT3C.6.

11. Anand M. Shrivastav, **Sruthi P. Usha** and Banshi D. Gupta, "Fiber Optic SPR sensor for detection of triclosan using molecular imprinted polymeric layer", Australian Conference on Optical Fiber Technology, Sydney (Australia), September 5-8, (2016) AT5C.7.

12. **Sruthi P.Usha**, Anand M. Shrivastav and Banshi D. Gupta, "FO-LMR based chlorine gas sensor using zinc oxide nanostructure", Frontiers in Optics, Rochester (USA), October 17-21 (2016) JTh2A.52.

13. Banshi D. Gupta, Anand M. Shrivastav and **Sruthi P. Usha**, "Molecular imprinting and SPR based fiber optic sensor for 1-Naphthol", Frontiers in Optics, Rochester (USA), October 1721 (2016) JTh2A.44.

14. Anand M. Shrivastav, **Sruthi P. Usha** and Banshi D. Gupta, "Optical fiber SPR sensor for simultaneous determination of Cu(II) and Pb(II) ions using molecular imprinting", Laser Science-Frontiers in Optics, Rochester (USA), October 17-21 (2016) JTh2A.53.

15. **Sruthi P. Usha** and Banshi D. Gupta, "Fiber Optic SPR based P-Cresol Sensor using Ag/ZnO nanoparticle-Chitosan/tyrosinanse", 76th JSAP-OSA Autumn Meeting, Nagoya (Japan), September 13-16, 2015.

16. **Sruthi P. Usha** and Banshi D. Gupta, Fiber optic glucose sensor utilizing coatings of gold/ZnO nanorods/glucoseoxidase", 4th International Conference on Bio-Sensing Technology, Lisbon (Portugal), May 10-13, 2015.

17. **Sruthi P. Usha**, Satyendra K. Mishra and Banshi D. Gupta, "Surface plasmon resonance based fiber optic chlorine gas sensor utilizing Ag/ZnO thin film", Photonics 2014: 12th International Conference on Fiber Optics and Photonics, Kharagpur (India), December 13-16 (2014).

18. Satyendra K. Mishra, **Sruthi P. Usha** and B.D. Gupta, "Fiber optic LSPR gas sensor utilizing ZnO nanoparticles for ammonia sensing", Photonics 2014: 12th International Conference on Fiber Optics and Photonics, Kharagpur (India), December 13-16 (2014).

ADDITIONAL INFORMATION

Career breaks:

I was on maternity and childcare leave from:
18 September 2018 to 31 April 2019 and
1 August 2021 to 31 January 2023

REFEREES

- **Prof. Dr. Martina Gerken (Mentor, Kiel University)**
  Dean, Faculty of Engineering, Kiel University
  &
  W3 Professor, Chair of Integrated Systems and Photonics,
  Institute of Electrical Engineering and Information Technology
  Faculty of Engineering, Kiel University, Germany
  Email: mge@tf.uni-kiel.de

- **Dr. rer. Hum. Pritam Sukul (Colleague and Collaborator)**
  Head of Ohmic Way to Life Group,
  Clinic & Polyclinic for Anaesthesiology, Intensive Care Medicine & Pain Therapy (KAIS),
  Rostock University Medical Center (UMR), Germany.
  Email: pritam.sukul@uni-rostock.de

- **Prof. Dr. Banshi D. Gupta (PhD Supervisor)**
  Emeritus Professor,
  Fiber Optic Sensors Group,
  Department of Physics
  Indian Institute of Technology Delhi (IITD), India
  Email: bdgupta@physics.iitd.ac.in; banshigupta@gmail.com

- **Prof. Dr. V.V.R. Sai**
  Full Professor,
  Biosensors Laboratory,
  Department of Applied Mechanics and Biomedical Engineering
  Indian Institute of Technology Madras (IITM), India
  Email: vvrsai@iitm.ac.in