Curriculum Vitae

Manoj Mishra, Ph.D.

(Senior Optica Member)
Associate Professor, Department of PHYSICS,
SKSC, Somaiya Vidyavihar University,
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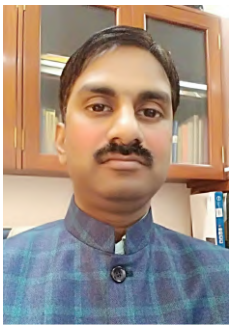
▶ **GoogleScholar:** https://scholar.google.com/citations?user=eZjP9oUAAAAJ&hl=en



Summary of Research Activities

- Number of Journals and Conferences Publications: **26** and **30** respectively.
- Number of Book and Book Chapter Publications: **02** and **03** respectively
- Short-Term Courses Attended: **04** respectively.
- Number of M. Tech. + M.Sc. Dissertations supervised: $\mathbf{04} + \mathbf{07} = \mathbf{11}$.
- Number of the sponsored project completed: **01** (DST-SERB, Rs **12.72** Lacks.)
- Number of the sponsored project going on: **01** (MUST, Rs **0.95** Lacks.)
- Number of the invited talk delivered: **13**

Employment History (21+ years of teaching experiences)

- **Associate Professor of PHYSICS** at *SKSC, Somaiya Vidyavihar University*, Vidyavihar, Mumbai, India.; engaged in Teaching and Research. (Pay band 13A), from **29 Nov 2023** to till date.

- **Assistant Professor-II** at *Mody University of Science and Technology* (MUST), Lakshmangarh-332311, Sikar, Raj., India. (formerly MITS); engaged in Teaching and Research. [15600 – 39100, Basic $23380 + 7K$, Gross: 75091/-]; from **1 July 2014** to **27 Nov 2023**.
- **Assistant Professor-I** at *MUST-Lakshmangarh*; engaged in Teaching and Research. [15600 – 39100, Grade Pay 6000/–]; from **1 Sept 2011** to **31 Jun 2014**.
- **Post-Doc** at *Catholic University of Daegu*, Hayang, **S. Korea** from **1 Sept 2010** to **31 Aug 2011**.
- **Assistant Professor-I** at *MUST-Lakshmangarh*; engaged in Teaching and Research. [15600 – 39100, Grade Pay 6000/–]; from **1 Feb 2010** to **31 Aug 2010**.
- **Lecturer** at *MUST-Lakshmangarh*; engaged in Teaching and Research. [8000 – 275 – 13500]; from **3 Dec 2007** to **31 Jan 2010**.
- **Lecturer** at *United College of Engineering & Research*, Naini, Allahabad, UP, India, engaged in Teaching and Research. [8000 – 275 – 13500]; from **11 Sept 2006** to **28 Nov 2007**.
- **Research Scholar** at *Birla Institute of Technology*, Mesra-835215, Ranchi, JH, India, under DST sponsored research project; from **27 Sept 2022** to **09 Sept 2006**.

Education

2010 **Ph.D., Birla Institute of Technology, Mesra, Ranchi**
Thesis title: *Investigation on Propagation Characteristics of Dispersion Managed Breathers in Long-Haul Optical Communication Systems.*
under the supervision of Prof. S. Konar, BIT-Mesra in the area of **Nonlinear Optics**.

2000 **M.Sc. (Physics), Rani Durgawati University, Jabalpur**
from Jabalpur Engineering College scored (1297/2000) 64.85%.

1998 **B.Sc. (PCM), Rani Durgawati University, Jabalpur**
from Govt. Science College, Jabalpur, scored (1165/1800) 64.72%.

1995 12^{th} **(HSSCE, PCM), Madhya Pradesh Board of Secondary Education**
from OFKEEHSS, Jabalpur, Scored (252/450) 56.00%.

1993 10^{th} **(HSCE), Madhya Pradesh Board of Secondary Education**
from OFKEEHSS, Jabalpur, Scored (440/650) 67.68%.

Sponsored Research Projects (Completed): 02

- DST-SERB sponsored research project entitled "***Numerical investigation of optical properties of plasmonics waveguides and its application to plasmonics devices***" with a budget of Rs 12.72 Lacks has been sanctioned for 3 years along with 1 JRF from 1 Apr 2014 to 31 Mar 2017 (FTP/PS-211/2012).
- Mody University of Science and Technology, Lakshmangarh sponsored a seed money project entitled "***Impact of higher-order diffraction on beam dynamics in nonlocal nonlinear media***" with a budget of Rs 0.95 Lacks has been sanctioned for 2 years for session 2022 – 2024 (SM/2022-23/007).

Computer Literacy

- 'A' level (***Advanced Diploma in Computer Application***) from **DOEACC Society** (a joint scheme of AICTE and Department of Information Technology, Government of India), under Direct Student Scheme, 'B' grade (65-74%), 2006.
- ***Diploma in Advanced Computing*** (DAC) from Advanced Computing Training School (ACTS), **Centre for Development of Advanced Computing (CDAC), Bangalore**, India. (64.83%) in July-2001.
- Knowledge of Scientific Tools like **Maple, Matlab, LaTeX, FORTRAN, Python, and C language.**

Ph.D. Thesis Guidance:

- Mr. S. K. Kajala (Date of Registration: Nov 2020), Pre-PhD completed.
- Mr. Abhishek Kumar (Date of Registration: Sept 2021).
- Ms. Divya Yadav (Date of Registration: Aug 2022).

M. Tech. and M. Sc. Thesis Guidance: (Total 11)

(2022) *Study on beam propagation dynamics in a dissipative nonlocal nonlinear media* by Ms. Keerti Meena (200329) (MSc-Physics).

(2021) *Study on role of surface plasmon resonance in biosensor* by Ms. Ruchita Ojha (190558) (MSc-Physics).

Study on surface plasmon resonance-based biosensor by Ms. Prerna (160556) (MSc-Physics).

(2019) *Investigation of power transfer between two adjacent plasmonics waveguides* by Ms. Vishakha Takhar (140416) (MSc-Physics).

M. Tech. and M. Sc. Thesis Guidance: (Total 11) (continued)

(2018)
- *Study on surface plasmon polariton and dispersion relation of a plasmonics coupler* by Ms. Puja (160654) (MSc-Physics).

(2017)
- *Study on efficiency enhancement of silicon solar cells by metallic nanoparticles-II* by Ms. Priyanka Avasthi (150716) (MSc-Physics).
- *Study on efficiency enhancement of silicon solar cells by metallic nanoparticles-I by Ms. Rajni* (150717) (MSc-Physics).

(2014)
- *Numerical investigation on Plasmonics Couplers* by Ms. Poonam Dhand (120465), M.Tech(NST).
- *Investigation on Properties of Evanescent Waves at Metal Dielectric Interface* by Ms. Stuti Prakash Singh (120470), M. Tech (NST).

(2013)
- *Simulation of waves in nonlinear metamaterials* by Ms. Khushboo Sharma (110401), M.Tech (NST).
- *Numerical investigation of plasmonics waveguides* by Ms.Yamini Garg (110404), M.Tech (NST).

Administrative Responsibilities

- Advisor for Optica Student Chapter, USA since 2017 at MUST-Lakshmangarh.
- Member of examination conduction team of SLAS on TCS-ION platform since Aug-2021.
- Member of examination conduction committee from July 2015 to till date.
- Member of examination result section from July 2016 to Dec 2017.
- Member of BOS since July 2015.
- Actively participate in designing of M.Sc. (Physics) and B.Sc (H) syllabi.
- Faculty In-charge of the dissertation of M. Tech. (NST) (2012 - 2015) and M. Sc. (Physics) since 2017-2020.
- Faculty In-charge of Nano-simulation Lab from 2014-2015.
- Committee member of Founder's day celebration and University admission since Dec-2007
- Coordinator of many papers in the Department.

Subject Taught

- **UG (B. Tech.):** Engineering Physics I & II, and Electronics Programming.
- **PG (M. Tech.):** Nanophotonics, Elements of Material Science & Properties of Nanomaterial (EMSPNM), and Mathematical Modeling & Simulation for Nanostructures (MMSNS).
- **UG (B. Sc.):** Electromagnetism, Solid State Phy. & Devices, Computational Physics, Basic Physics, Forensic Physics, Basic Electronics, and Optical Fiber.
- **PG (M. Sc.):** Classical Electrodynamics, Computational Physics, Instrumentation and Characterization Techniques, Condensed Matter Physics, Semiconductor Physics and Devices, Digital Electronics, and Ancient Indian Science.
- **Ph.D.:** Research Methodology, and Advances in Subject (Physics).

Membership of Professional Bodies

- Life Member of **Indian Physics Association (GEN/LM/**12897**)**.
- Life Member of **Indian Laser Association (LM-**837**)**.
- Member of **Optical Society of America (OSA-**974356**)**.
- Life member of **Vigyan Bharati (LM/**2020/0440**)**.

Short-Term Courses Attended

- **Science Academies' Refresher Course** in Experimental Physics, Organize at Mody University of Science and Technology, Lakshmangarh, Sikar, Raj., 29/12/2016 to 13/01/2017.
- SERC (DST) **School on Laser Physics and Technology**, Organize at RRCAT, Indore, 12-30 March 2012.
- **Faculty Development Program** conducted by National Institute for Technical Teachers' Training and Research, Chandigarh, Organize at UCER, Allahabad from 8-19 January 2007.
- Second SERC (DST) **School on Nonlinear Dynamics**, Organize at Pondicherry University, 4-24 January 2006.

Extra Curricular Activities

- Worked as a member of the Organizing Committee of
  a) Science Academies' Refresher Course in Experimental Physics 2016 and 2018.
  b) NCRTMSA-2012, MITSNCE-2008 and MITSNCE-2009 at MUST, Lakshmangarh.
  c) Colloquium-2003 and Colloquium-2004 at BIT, Mesra.
  d) IWPSD-2002 and Plasma-2003 at BIT, Mesra.
  e) World Year of Physics 2005, jointly organized by Govt. of Jharkhand and BIT, Mesra.
- National Cadet Core (NCC) 'B' Certificate.

Personal Details

1.	Full Name	:	Dr. Manoj Mishra				
2.	Name of Spouse	:	Dr. S. Mishra, Ph.D. (Sanskrit)				
3.	Father's Name	:	Shri. R. D. Mishra	4.	Mother's Name	:	Smt. S. K. Mishra
5.	Date of birth	:	27/12/1977	6.	Marital Status	:	Married
7.	Languages Known	:	Hindi and English	8.	Hobbies	:	Listening Music
9.	Religion	:	Hindu	10.	Nationality	:	Indian
11.	Permanent Address	:	S/O, Shri RD Mishra, Village- Khozouli Nakib, Post : Raunapar, Dist. : Azamgarh, UP-276122, India.				
12.	Current Address	:	Dr. M. Mishra, Associate Professor, Department of Physics, SKSC, Somaiya Vidyavihar University, Vidyavihar, Mumbai- 400077, India.				

Place: Vidyavihar, Mumbai

Date: *December 7, 2023*

[Dr. Manoj Mishra]

Research Publications

Journal Articles (total 26)

1. (2023) **Manoj Mishra**, S. K. Kajala, S. Shwetanshumala, M. Sharma, and S. Jana*, "Asymmetric impact of higher-order diffraction on narrow beam dynamics in nonlocal nonlinear media," *Applied Physics B*, vol. 129, no. 11, p. 194, 2023, ISSN: 1432-0649, [Springer, Germany, SCI-2.1]. DOI: https://doi.org/10.1007/s00340-023-08137-1.

2. (2023) M. Sharma, S. K. Kajala, **Manoj Mishra***, B. Singh, and S. Jana, "A novel algorithm to determine the input energy for soliton generation in a media with a patterned property," *Communications in Nonlinear Science and Numerical Simulation*, vol. 126, p. 107 513, 2023, ISSN: 1007-5704, [Elsevier, USA, SCI-3.9]. DOI: https://doi.org/10.1016/j.cnsns.2023.107513.

3. (2023) **Manoj Mishra**, K. Meena, D. Yadav, B. Singh, and S. Jana*, "The dynamics, stability and modulation instability of gaussian beams in nonlocal nonlinear media," *The European Physical Journal B*, vol. 96, p. 109, 2023, ISSN: 1434-6036, Springer Science+Business Media, France, SCI-1.6]. DOI: https://doi.org/10.1140/epjb/s10051-023-00577-0.

4. (2022) **Manoj Mishra**, S. K. Kajala, M. Sharma, S. Konar, and S. Jana*, "Energy optimization of diffraction managed accessible solitons," *J. Opt. Soc. Am. B*, vol. 39, no. 10, pp. 2804–2812, 2022, ISSN: 1520-8540, [Optica Publishing Group, USA, SCI-2.058]. DOI: https://doi.org/10.1364/JOSAB.470144.

5. (2022) **Manoj Mishra**, S. K. Kajala, M. Sharma, S. Konar, and S. Jana*, "Generation, dynamics and bifurcation of high power soliton beams in cubic-quintic nonlocal nonlinear media," *Journal of Optics*, vol. 24, no. 5, p. 055 504, 2022, ISSN: 2040-8986, [IOP, UK, SCI-2.516]. DOI: https://doi.org/10.1088/2040-8986/ac5e52.

6. (2022) M. Sharma, A. Kumar, M. Nath, **Manoj Mishra**, and N. Borgohain*, "Enhanced supercontinuum by tan-hyperbolic Gaussian pulses," *Journal of Nanophotonics*, vol. 16, no. 2, p. 026 007, 2022, ISSN: 1934-2608, [SPIE, USA, SCIE-1.494]. DOI: doi:10.1117/1.JNP.16.026007.

7. (2022) **Manoj Mishra**, V. Takhar, and S. Jana*, "Directional coupler based on metal-insulator-metal plasmonic waveguide," *Journal of Optoelectronics and Advanced Materials*, vol. 24, no. 2, pp. 15–20, 2022, ISSN: 1454 – 4164, [INOE Publishing House, SCI- 0.50]. DOI: https://joam.inoe.ro/articles/directional-coupler/.

8. (2022) A. Kumar, **Manoj Mishra**, B. Singh, M. Sharma*, and P. K. Gupta, "Raman response function of AlGaAs doped glass," *Nanoscience & Nanotechnology-Asia*, vol. 12, no. 6, p. 1, 2022, ISSN: 2210-6820, [Bentham Science Publishers, Singapore, Indexed in Scopus]. DOI: doi:10.2174/2210681212666220615101100.

9. (2021) **Manoj Mishra**, M. Sharma*, and P. Gupta, "Compact MIM plasmonic ring resonator for nano-interconnect applications," *Physica E: Low-dimensional Systems and Nanostructures*, vol. 130, p. 114 711, 2021, ISSN: 1386-9477, [Elsevier, UK, SCI- 3.369]. DOI: https://doi.org/10.1016/j.physe.2021.114711.

10. (2021) **Manoj Mishra**, P. Jhajharia, and S. Jana*, "Power exchange dynamics for performance optimization in a miniature plasmonic waveguide coupler," *Optoelectronics and Advanced Materials-Rapid Communications*, vol. 15, no. 5-6, pp. 207–212, 2021, ISSN: 2065 – 3824, [INOE Publishing House, SCI-0.556]. DOI: https://oam-rc.inoe.ro/articles/power-exchange-dynamics/.

11. (2013) Y. Garg, K. Sharma, and **Manoj Mishra***, "Application of FDTD method in simulation of flat-top beam in optical fiber," *International Journal of Pure and Applied Mathematics*, vol. 83, no. 5, pp. 667–671, 2013, ISSN: 1311-8080, [Academic Publications, BULGARIA , Indexed in Scopus]. DOI: https://doi.org/10.12732/ijpam.v83i5.9.

12. (2013) **Manoj Mishra***, P. Paltani, B. Singh, and K. Singh, "Gaussian beam in highly nonlocal nonlinear medium," *International Journal of Pure and Applied Mathematics*, vol. 83, no. 5, pp. 673–677, 2013, ISSN:

1311-8080, [Academic Publications, BULGARIA , Indexed in Scopus]. DOI: http://dx.doi.org/10.12732/ijpam.v83i5.10.

13 (2011) **Manoj Mishra*** and W.-P. Hong, "Investigation on propagation characteristics of super–Gaussian beam in highly nonlocal medium," *Progress in Electromagnetics Research B*, vol. 31, pp. 175–188, 2011, ISSN: 1937-6472, [EMW Publishing, USA, SCOPUS, SJR-0.26]. DOI: https://doi.org/10.2528/PIERB11051302.

14 (2011) **Manoj Mishra*** and W.-P. Hong, "The role of the asymmetry of a dispersion map in a dispersion managed optical communication system possessing quintic nonlinearity," *J. Korean Phys. Soc.*, vol. 58, p. 1614, 2011, ISSN: 1976-8524, [Springer, SCI-0.657]. DOI: https://doi.org/10.3938/jkps.58.1614.

15 (2008) S. Jana, S. Konar*, and **Manoj Mishra**, "Soliton switching in fiber coupler with periodically modulated dispersion, coupling constant dispersion and cubic quintic nonlinearity," *Zeitschrift für Naturforschung A*, vol. 63, no. 3-4, pp. 145–151, 2008, ISSN: 0932-0784, [Verlag der Zeitschrift für Natur forschung,German SCI-1.712]. DOI: https://doi.org/10.1515/zna-2008-3-405.

16 (2008) **Manoj Mishra** and S. Konar*, "High bit rate dense dispersion managed optical communication systems with distributed amplification," *Progress in Electromagnetics Research*, vol. 78, pp. 301–320, 2008, ISSN: 1070-4698, [EMW Publishing ,USA, SCI-6.6]. DOI: https://doi.org/10.2528/PIER07091305.

17 (2007) **Manoj Mishra** and S. Konar*, "Interaction of solitons in a dispersion managed optical communication system with asymmetric dispersion map," *Journal of Electromagnetic Waves and Applications*, vol. 21, no. 14, pp. 2049–2058, 2007, ISSN: 0920-5071, [Brill publishing house,USA, SCI-1.438]. DOI: https://doi.org/10.1016/j.physleta.2006.11.025.

18 (2007) S. Konar*, **Manoj Mishra**, and S. Jana, "Nonlinear evolution of cosh–Gaussian laser beams and generation of flat top spatial solitons in cubic quintic nonlinear media," *Physics Letters A*, vol. 362, no. 5-6, pp. 505–510, 2007, ISSN: 0375-9601, [Elsevier, UK, SCI- 2.707]. DOI: https://doi.org/10.1016/j.physleta.2006.11.025.

19 (2006) S. Konar* and **Manoj Mishra**, "Nonlinear evolution of cosh-Gaussian laser beams and generation of flat top spatial solitons in cubic quintic nonlinear media," *International Journal of Microwave and Optical Technology*, vol. 2, no. 2, pp. 892–898, 2006, ISSN: 1553-0396, [online journal, USA, SJR 0.16]. DOI: https://www.ijmot.com/VOL-1-NO-2-II.aspx.

20 (2006) S. Konar*, **Manoj Mishra**, and S. Jana, "The effect of quintic nonlinearity on the propagation characteristics of dispersion managed optical solitons," *Chaos, Solitons & Fractals*, vol. 29, no. 4, pp. 823–828, 2006, ISSN: 0960-0779, [Elsevier, UK, SCI- 9.922]. DOI: https://doi.org/10.1016/j.chaos.2005.04.122.

21 (2005) S. Konar* and **Manoj Mishra**, "Effect of higher order nonlinearities on induced focusing and on the conversion of circular Gaussian laser beams into elliptic Gaussian laser beams," *Journal of Optics A: Pure and Applied Optics*, vol. 7, no. 10, p. 576, 2005, ISSN: 1464-4258, [Institute of Physics Publishing, UK, SCI-2.516]. DOI: https://doi.org/10.1088/1464-4258/7/10/009.

22 (2005) S. Konar*, S. Jana, and **Manoj Mishra**, "Induced focusing and all optical switching in cubic quintic nonlinear media," *Optics Communications*, vol. 255, no. 1-3, pp. 114–129, 2005, ISSN: 0030-4018, [Elsevier, UK, SCI-2.31]. DOI: https://doi.org/10.1016/j.optcom.2005.05.038.

23 (2005) **Manoj Mishra** and S. Konar*, "Induced focusing and conversion of a Gaussian beam into an elliptic Gaussian beam," *Pramana*, vol. 65, no. 3, pp. 425–436, 2005, ISSN: 0304-4289, [Indian Academy of Sciences and Springer, SCI- 1.688]. DOI: https://doi.org/10.1007/BF02704201.

24 (2005) S. Konar*, **Manoj Mishra**, and S. Jana, "Dispersion-managed optical solitons with higher-order nonlinearity," *Fiber and integrated optics*, vol. 24, no. 6, pp. 537–548, 2005, ISSN: 0146-8030, [Taylor & Francis Inc. USA, SCI- 1.087]. DOI: https://doi.org/10.1080/01468030500240635.

25 (2004) S. Konar* and **Manoj Mishra**, "Double humped grey and black solitons in kerr nonlinear media," *Optical and quantum electronics*, vol. 36, no. 8, pp. 699–708, 2004, ISSN: 0306-8919, [Kluwer Academic

Publishers, The Netherlands, SCI- 2.794]. DOI: https://doi.org/10.1023/B:OQEL.0000039601.94185.1e.

26 (2004) **Manoj Mishra** and S. Konar*, "All optical light deflection and displacement using nonlinear slab waveguide," *Fiber and integrated optics*, vol. 23, no. 4, pp. 275–285, 2004, ISSN: 0146-8030, [Taylor & Francis Inc. USA, SCI- 1.087]. DOI: https://doi.org/10.1080/01468030490459999.

Books and Chapters

1 (2023) **Manoj Mishra** and S. Jana*, "Accessible soliton breathers in diffraction-managed media," in *Photonics-2023, **IISc-Bangalore**, July 5-8*, 2023, **–**. DOI: Accepted.

2 (2021) V. Takhar, M. Sharma, B. Singh, and **Manoj Mishra***, "Simulation of power transfer in plasmonic waveguide coupler," in *Optical and Wireless Technologies, **MNIT-Jaipur**, Oct 9-10, 2021*, Springer Nature Singapore, 2023, pp. 39–43, ISBN: 978-981-19-1645-8. DOI: DOI:10.1007/978-981-19-1645-8_5.

3 (2021) M. Sharma, S. K. Kajala, B. Singh, and **Manoj Mishra***, "Effect of super Gaussian parameter on soliton interaction length in highly nonlocal media," in *Optical and Wireless Technologies, **MNIT-Jaipur**, Oct 9-10, 2021*, 2023, pp. 11–16, ISBN: 978-981-19-1645-8. DOI: DOI:10.1007/978-981-19-1645-8_5.

4 (2017) **Manoj Mishra*** and S. Konar, *Induced Focusing and Optical Solitons*. LAP LAMBERT Academic Publishing GmbH & Co., **Germany**, 2017, ISBN: 978-620-2-05384-6.

5 (2012) **Manoj Mishra*** and S. Konar, *Dispersion Managed Solitons*. LAP LAMBERT Academic Publishing GmbH & Co., **Germany**, 2012, ISBN: 978-3-659-15142-2.

Conference Proceedings (total 30)

1 (2023) Kritika Halder, **Manoj Mishra***, S. Shwetanshumala, S. Jana, and S. Konar, "Dynamics of optical soliton in MCQW under influence of giant higher order nonlinearities," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Tacoma, Washington, USA**, 9-12 October 2023.*, Optica Publishing Group, 2023, JM7A.58, ISBN: 978-1-957171-17-3.

2 (2023) S. Shwetanshumala, J. Kumar, and **Manoj Mishra***, "Modulation instability in coherent four-level system in tripod configuration due to intersubband transition," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Tacoma, Washington, USA**, 9-12 October 2023.*, Optica Publishing Group, 2023, JM7A.114, ISBN: 978-1-957171-17-3. DOI: https://doi.org/10.1364/FIO.2022.JW5A.21.

3 (2023) Soumendu Jana, Mohit Sharma, Brajraj Singh, and **Manoj Mishra***, "Identifying stable zones for propagation of optical solitons in cubic-quintic nonlocal nonlinear media," in *Quantum 2.0 Conference 2023@**Denver, Colorado, USA**; 18 - 22 June 2023.*, Optica Publishing Group, 2023, QTh2A.15, ISBN: 978-1-957171-27-2. DOI: https://doi.org.

4 (2022) Soumendu Jana, Mohit Sharma, Brajraj Singh, Sandeep K. Kajala, and **Manoj Mishra***, "Interaction dynamics of accessible solitons in highly nonlocal cubic-quintic nonlinear media," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Rochester, New York**, USA, 16 - 20 October 2022.*, Optica Publishing Group, 2022, JTu5A.21, ISBN: 978-1-957171-17-3. DOI: https://doi.org/10.1364/FIO.2022.JTu5A.21.

5 (2022) **Manoj Mishra**, Sandeep K. Kajala, Mohit Sharma, Brajraj Singh and Soumendu Jana*, "Stabilizing the optical beam in higher-order nonlocal nonlinear media," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Rochester, New York**, USA, 16 - 20 October 2022.*, Optica Publishing Group, 2022, JTu5A.42, ISBN: 978-1-957171-17-3. DOI: https://doi.org/10.1364/FIO.2022.JTu5A.42.

6 (2022) Brajraj Singh, Manisha Yadav, Divya Kanwar Shekhawat, Mohit Sharma and **Manoj Mishra***, "Plasmonic ring-resonator-based infrared sensor for ri change detection," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Rochester, New York, USA**, 16 - 20 October 2022.*, Optica Publishing Group, 2022, JTu4B.36, ISBN: 978-1-957171-17-3. DOI: https://doi.org/10.1364/FIO.2022.JTu4B.36.

7. (2022) **Manoj Mishra**, Abhishek Kumar, Brajraj Singh, Soumendu Jana and Mohit Sharma*, "Ultra-short pulse evolution in highly nonlinear medium at communication regime," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Rochester, New York, USA**, 16 - 20 October 2022.*, Optica Publishing Group, 2022, JW4B.30, ISBN: 978-1-957171-17-3. DOI: https://doi.org/10.1364/FIO.2022.JW4B.30.

8. (2022) Kritika Halder, S. Shwetanshumala, **Manoj Mishra***, and S. Konar, "Investigation on modulation instability in multiple coupled quantum wells," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Rochester, New York, USA**, 16 - 20 October 2022.*, Optica Publishing Group, 2022, JW5A.21, ISBN: 978-1-957171-17-3. DOI: https://doi.org/10.1364/FIO.2022.JW5A.21.

9. (2022) Gurpreet Kaur, Soumendu Jana*, **Manoj Mishra** and Rajib Pradhan, "Optimizing the optical frequency comb," in *Frontiers in Optics + Laser Science 2022 (FIO, LS), **Rochester, New York, USA**, 16 - 20 October 2022.*, Optica Publishing Group, 2022, JTu4B.18, ISBN: 978-1-957171-17-3. DOI: https://doi.org/10.1364/FIO.2022.JTu4B.18.

10. (2022) Neeraj Sharma, Rajib Pradhan, **Manoj Mishra** and Soumendu Jana*, "Diffraction managed dissipative breather soliton in alternative slabs of metamaterial and dielectric," in *DAE-BRNS National Laser Symposium -31, **IIT-Kharagpur**, December 3-6, 2022.*, 2022, CP-04–33.

11. (2021) Mohit Sharma, S. K. Kajala, B. Singh, and **Manoj Mishra***, "Propagation characteristics of optical beam in a diffraction managed highly nonlocal media," in *Frontiers in Optics 2021, **Washington, DC** United States 1–4 November 2021*, Optica Publishing Group, 2021, JW7A–40, ISBN: 978-1-55752-308-2. DOI: https://doi.org/10.1364/FIO.2021.JW7A.40.

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15. (2019) Nickita Acharya and **Manoj Mishra***, "Numerical simulation of a chain of super-Gaussian beam in a highly nonlocal media," in *Laser Science – 2019, **Washington, DC** United States 15–19 September 2019*, Optica Publishing Group, 2019, JTu3A–60, ISBN: 978-1-943580-67-5. DOI: https://doi.org/10.1364/FIO.2019.JTu3A.60.

16. (2017) Prachi Gupta, Puja Jhajharia, Nisha Sharma, and **Manoj Mishra***†, "Compact MIM plasmonics ring resonator for filtering application," in *International Conference on Advances in Optics and Photonics "ICAOP-2017"*, **GJUS&T, Hisar**, Haryana, 23-26 Nov, 2017.

17. (2015) Prachi Gupta and **Manoj Mishra***†, "Effect of channel width in a MIM based plasmonic waveguide with a ring resonator," in *International Conference on Emerging Technologies: Micro to Nano (ETMN 2015)*, **Manipal University, Jaipur**, 24-25 October., 2015.

18. (2012) **Manoj Mishra***, W. P. Hong, and S. Konar, "Investigation on propagation characteristics of flat-top beam in highly nonlocal medium," in *International Conference on Fibre Optics and Photonics @**IIT-Madras**, Chennai, 9-12 Dec, 2012.*, Optica Publishing Group, 2012, TPo–47. DOI: https://doi.org/10.1364/PHOTONICS.2012.TPo.47.

19 (2012) **Manoj Mishra**[*], S. Konar, and W. P. Hong, "The role of the asymmetry of a dispersion map in a high speed dispersion managed optical communication system," in *2012 International Conference on Fiber Optics and Photonics (PHOTONICS) @**IIT-Madras**, Chennai, 9-12 Dec, 2012.*, IEEE, 2012, pp. 1–3, ISBN: 978-1-4673-4718-1. DOI: NA.

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21 (2008) **Manoj Mishra**[*†], and S Konar, "Ultra-short pulses in dispersion managed optical communication system," in *ISRAMA-08*, kOLKATA Mathematical Society, kolkata, December 19-21, 2008.

22 (2006) S. Jana, S. Konar and **Manoj Mishra**[*], "Two component composite spatial solitons supported by cross-phase modulation," in *3rd International Conference on Computers and Devices (CODEC-2006)*, Institute of Radio Physics & Electronics, **University of Calcutta**, Kolkata, India, December 18-20, 2006.

23 (2006) **Manoj Mishra**[*], and S Konar, "Intra-pulse interaction in perturbed dense dispersion managed soliton based optical communication systems," in *International Conference on Fiber Optics and Photonics, PHOTONICS 06*, **Central University of Hyderabad**, India, December 13-16, 2006.

24 (2006) **Manoj Mishra**[*], Soumendu Jana, S. Konar and Sunil Kumar Arya, "Nonlinear evolution of cosh-Gaussian laser beams and generation of flat top soliton in chalcogenide glasses," in *Proceedings of the International Conference On Electronic and Photonic Materials, Devices and System (EPMDS-2006)*, The Department of Electronic Science, **University of Calcutta**, Kolkata, India, January 4-6, 2006.

25 (2005) Soumendu Jana, S. Konar and **Manoj Mishra**[*†], "Dynamic transformation of non-Gaussian beams in cubic quintic nonlinear media (no full paper, only poster)," in *Seminar on Optics of Photonic Band-Gap Materials (PBG-2005)*, **IIT-Kharagpur**, India, October 29-30, 2005.

26 (2004) S. Jana, S. Konar and **Manoj Mishra**[*†], "Hamiltonian dynamics of optical pulses in ultra high bit rate dispersion managed communication systems," in *7th International Conference on Optoelectronics, Fiber Optics and Photonics, Photonics-2004*, **CUSET, Cochin**, Kerala, December 9-11, 2004.

27 (2004) **Manoj Mishra**[*†] and S. Konar, "All optical switches using kerr nonlinear slab wave guide," in *National Conference on Emerging Areas in Applied Physics (NCEAAP-2004)*, Department of Applied Physics, **ISM-Dhanbad**, India, from 21-23 Feb, 2004.

28 (2004) **Manoj Mishra**[*†] and S. Konar, "Conversion of a circular Gaussian laser beam into elliptical beam and vice versa using optical nonlinearity," in *National Conference on Emerging Areas in Applied Physics (NCEAAP-2004)*, Department of Applied Physics, **ISM-Dhanbad**, India, from 21-23 Feb, 2004.

29 (2004) **Manoj Mishra**[*†] and S. Konar, "Design of all optical light deflector and spot size controller," in *International Conference on Computers and Devices (CODEC-2004)*, Institute of Radio physics & Electronics, **University of Calcutta**, Kolkata, India, January 1-3, 2004.

30 (2003) S. Konar and **Manoj Mishra**[*†], "Double humped grey and black optical solitons in kerr law nonlinear media," in *National Conference on Nonlinear System and Dynamics (NCNSD-2003)*, **IIT-Kharagpur**, India, December 28-30, 2003.

([†] signifies attending a conference and presenting a paper. [*] signifies the corresponding author.)

List of Conference Attended: 24

2023

- **Frontiers in Optics + Laser Science**, **Tacoma, Washington, USA**, 09 - 12 October 2023 (Online mode).
- **Quantum 2.0 Conference** and Exhibition, Optica, **Denver, USA**.", June 18-22, 2023 (online mode).
- Science Academies Lecture Workshop on "Chemistry for sustainable future" @ Mody University of Sc. & Tech., Lakshmangarh, Jan 30-31, 2023.

List of Conference Attended: 24 (continued)

- Students' Innovation Festival (SIF), **India Science International Festival (IISF)**, MANIT, Bhopal, 21-24 Jan 2023. (As an Expert and organizing committee member).

2022

- **Akash for Life Conference**, National Conference & Exhibition scheduled during Nov 4-7, 2022 at **Uttaranchal University Campus, Dehradun**.
- **Frontiers in Optics + Laser Science**, **Rochester, USA**, 17 - 20 October 2022 (Online mode).

2021

- (Session chair) 5th International Conference on Optical and Wireless Technologies **(OWT-2021)**, **MNIT, Jaipur**, India, Oct 9-10, 2021.

2019

- (Session chair) 3rd International Conference on Optical and Wireless Technologies (**OWT-2019**), **MNIT, Jaipur**, India, March 16-17, 2019.

2017

- International Conference on Advances in Optics and Photonics "ICAOP-2017", **GJUS&T, Hisar**, Haryana, 23-26 Nov 2017.

2016

- **Science Academies' lecture workshop** on "Emerging Technologies based on Nano Science –A Popularization Workshop", **Mody University** of Science and Technology, Lakshmangarh, Rajasthan, 22-23 April 2016.

2015

- National Workshop on "**Energy Efficient Lightening Technology**: Recent Development and future ahead", **Mody University** of Science and Technology, Lakshmangarh, Rajasthan, 28 Nov 2015.
- International Conference on Emerging Technologies: Micro to Nano **(ETMN 2015)**, **Manipal University, Jaipur**, 24-25 October, 2015.
- Seminar on **Intellectual Property Rights** (IPR), **Mody University** of Science and Technology, Lakshmangarh, Rajasthan, 10 Jan 2015.

2014

- Science Academies' lecture workshop on "**Nanoscience & Nanotechnology**: Challenges and Opportunities", **Mody University** of Science and Technology, Lakshmangarh, Rajasthan, 21-22 Nov, 2014.

2012

- **NCRTMSA, 2012** (National Conference on Recent Trends in Mathematical Sciences and their Applications), **Mody University** of Science and Technology, Lakshmangarh, Rajasthan, 5-6 Nov 2012.

2009

- 2**nd MITSNCE09** (National Conference on Energy), **Mody University** of Science and Technology, Lakshmangarh, Rajasthan, October 31- Nov 09, 2009.
- **National Laser Symposium-2008**, **LASTEC, New Delhi**, January 7-10, 2009

2008

- **ISRAMA-08** (International Symposium on Recent Advances in Mathematics and its Application), **Mathematical Society of India, Kolkata**, December 19-21, 2008. (Invited Speaker.)
- **MITSNCE2008** (National Conference on Energy), **Mody University** of Science and Technology, Lakshmangarh, Rajasthan, October 18-19, 2008.

2005

- **PBG-2005** (Seminar on Optics of Photonic Band-Gap Materials), **IIT Kharagpur,** India, October 29-30, 2005.

2004

- **Photonics-2004**, **CUSET, Cochin**, Kerala, December 9-11, 2004.
- **NCEAAP-2004** (National Conference on Emerging Areas in Applied Physics), Department of Applied Physics, **Indian School of Mines, Dhanbad**, India.
- **CODEC-2004** (International Conference on Computers and Devices), Institute of Radiophysics & Electronics, **University of Calcutta, Kolkata**, India, January 1-3, 2004.

2003

- **NCNSD-2003** (National Conference on Nonlinear System and Dynamics), **IIT Kharagpur**, India, December 28-30, 2003.

Invited Talk and Resource Person: 13

2023

- *Hands-on experience on beam propagation method*, in Workshop named "Hands-on workshop on Analytical and Numerical Methods for Soliton" during 5-6 Aug 2023, organized by the School of Physics and Materials Science, **Thapar Institute of Engineering & Technology, Patiala.**

2022

- *An introduction to optical beam propagation in nonlocal nonlinear media* at Department of Physics, **Birla Institute of Technology, Mesra**, on 15.04.2022.
- *An overview of the nonlocal solitons in higher-order nonlocal nonlinear media* at **Department of Physics, MUST**, Lakshmangarh, Sikar, Raj. during Mody University OSA Student Chapter organized a program on 06/04/2022.
- *Application of Finite Difference Time Domain method in Simulation of light propagation through Optical media* , **SOLITON-22**: Workshop on Soliton in Optics, BEC, Plasma and Beyond… during 12-13 March 2022, organized by the School of Physics and Materials Science, **Thapar Institute of Engineering & Technology, Patiala.**

2021

- *Simulation of light propagation in homogeneous and inhomogeneous media: Beam Propagation Method*, Five Days **MHRD sponsored ATAL Online Faculty Development Program** (FDP) on Photonics: Fundamentals & Applications (28th June - 2nd July, 2021) organized by Department of Applied Science, **Samrat Ashok Technological Institute, Vidisha**, MP-464001. (29/06/2021)
- *Introduction to the Latex: A Tool For Research Writing*, International Conference on New Achievements in Science (30-31 March 2021) organized by Department of Physics, **Govt. College Tonk**, India on 31/03/2021.

2020

- *LaTeX 101: A beginner's guide to LaTeX* at Department of Physics, MUST, Lakshmangarh, Sikar, Raj. during **Mody University** OSA Student Chapter organized a program on 17/06/2020.
- *Hands on experience of LaTeX software* at **Prestige Institute of Engineering Management And Research, Indore** on 10/May/2020.

2018

- *Technical aspects of writing report and dissertation* at Department of Physics, **MUST, Lakshmangarh**, Sikar, Raj. during Mody University OSA Student Chapter organized a program on 15/02/2018.

2017

- *Introduction to LaTeX* at Department of Physics, **MUST, Lakshmangarh**, Sikar, Raj. during **Two days workshop** on LaTeX at Department. of Physics, MUST, Lakshmangarh, Sikar from 21-22 April 2017.
- *Introduction to FDTD method* at Department. of Physics, **Banasthali University, Rajasthan** during Faculty Development Program on 3 August 2017.
- *Skills of LATEX Documentation* at Department. of Physics, **Banasthali University**, Rajasthan during Faculty Development Program on 4 August 2017.

2016

- *Surface Plasmon-based Filters* at Department. of Physics, **Birla Institute of Technology, Mesra**, on 30.03.2016.

Workshop Organized

- **Two days workshop** on Latex from 21-22 April 2017. Total 33 participants attended from various colleges in Rajasthan.
- **Inauguration event** of OSA student chapter and invited talks of eminent scientists from the Optics field, 1 Feb 2018, Total of 110 participants attended.
- Organized **OSA traveling lecture** 2018, Speaker **"Dr. Federico Furch", Max-Born Institute, Berlin**, on 15-Oct-2018.

Reviewer of Research Paper of the Following Journal

- Results in Optics, Elsevier.
- Physics Letters A, Elsevier, ISSN: 0375-9601.
- Journal of Modern Optics, Taylor & Francis, ISSN 0950-0340 (Print), 1362-3044 (Online)
- Journal of Electromagnetic Waves and Applications/Progress in Electromagnetic Research (ISSN: 1070-4698, E-ISSN: 1559-8985)
- World Applied Sciences Journal (ISSN: 1818 - 4952).
- Journal of Optoelectronics and Advanced Materials (ISSN: PRINT: 1454 - 4164)

Webinars

Attended

- International Conference on New Achievements in Science (30-31 March 2021) organized by the Department of Physics, Govt. College Tonk, Tonk, Rajasthan, India.
- International Webinar on Multidisciplinary Research IWMR-2021 (13 March 2021) organized by the Department of Chemistry, Guru Nanak Dev College of Science, Ballarpur, Chandrapur, Maharashtra, India.
- National Webinar on Science Day (28/02/2021) organized by the Department of Physics, Govt. College Tonk, Tonk, Rajasthan, India.

Conducted

- Prof. Soumendu Jana, Thaper Institute of Engineering and Technology, Patiala has delivered a webinar lecture on the topic "***Laboratory to Life: Career Guidance for Science Students***" on 28/06/2023. The event was organized by SLAS-MUST.(Coordinator: Dr. M Mishra)
- Prof. Arun Kumar Sarma, Director General, NECTAR, New Delhi has delivered a webinar lecture on the topic "***Science, Technology, and Livelihood***" on 02/12/2022. The event was organized by MUOSASC and Vigyan Bharati (Coordinator: Dr. M Mishra)
- Dr. RK Gupta, Department of Physics, BITS-Pilani has delivered a webinar lecture on the topic "***Selected topics in Modern Optics***" on 22/06/2020. The event was organized by MUOSASC (Coordinator: Dr. M Mishra)
- Dr. Manoj Mishra, Department of Physics, MUST has delivered a webinar lecture on the topic "***LaTeX*** 101 ***(A beginner's guide to LaTeX)***" on 17/06/2020. The event was organized by MUOSASC (Coordinator: Dr. M Mishra)

References

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