

## BIODATA

1. Name: **Dr. Sintu Kumar**
2. Father's Name: **Shree Panchanand Prasad**
3. Mother's Name: Smt. **Shila Devi**
4. Department: **Physics**
5. Date of Joining the University: **02/07/2018**



6. Total Teaching Experience: UG- **3 Year 8 Month** PG- **3 Year 8 Month**
7. Total Research Experience: **8 Year 8 Month**
8. Area of Specialization:

**Laser matter interaction:** Nonlinear aspects of ultra-short laser pulses, Generation of high energy and high intense laser pulses, Generation of intense light pulses in the few-cycle regime, atto-second.

**Nonlinear optics:** ultrafast optics, Extreme Optics, Ultrafast laser generation inside plasma

**Laser plasma interaction:** laser plasma interaction and its applications like laser fusion, generation of THz radiations, and micro-machining the crystalline lens, Pulse amplification, Non-linear propagation of EM waves/ particle heating & acceleration in plasmas and other nonlinear medium (relativistic/ non-relativistic regime)

**Space Plasma:** Magnetic turbulence in plasmas which has applications in tokamak fusion and space research

### **Academic Qualifications:**

UG	B.Sc. DDUGU (2009)
PG	M.Sc. DDUGU (2012)
Ph.D.	Ph.D. (IIT Delhi) (2018)
PDF	
Any Other	UGC-JRF

9. International/National fellowship/financial support for advance studies/research

S. No.	Name of fellowship/financial support	Year of Award	National/International	Awarding Agency
1	UGC-JRF	2013	NATIONAL	UGC

10. International/National award/recognition for academics

S. No.	Name of award/recognition	Year of Award	Title of the innovation	National/International	Awarding Agency

11. Extension activity participation

S.No.	Name of activity	Year

If any award received-

S. No.	Name of activity	Name of award/recognition	Year of Award	National/International	Awarding Agency
<b>1</b>	<b>Teaching Award</b>	<b>Best Teacher Award</b>	<b>2021</b>	<b>National</b>	<b>Up State Government</b>
<b>2</b>	<b>Research Award</b>	<b>Best Research Award Under Top 50</b>	<b>2021</b>	<b>National</b>	<b>Given By UP Chief Minister</b>

12. Ph.D. supervised

S. No.	Name of the Ph.D. scholar	Title of the Thesis	Year of registration of the scholar	Year of award of Ph.D.

13. Research/Review Papers published

S n	Title of paper	Name of the author/s	Name of Journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal		
						Link to website of journal	Link to article/paper/abstract of the article	Is it listed in UGC Care list/Scopus/Web of Science/other, mention
1	<b>Compression of the laser pulse in magnetized plasma having relativistic regime</b>	<b>Kumar, Sintu, Chauhan, P. K., Sharma, R. P., and Uma, R.</b>	<b>Optik</b>	<b>2021</b>	<b>00304026</b>	<b><a href="https://www.sciencedirect.com/journal/optik">https://www.sciencedirect.com/journal/optik</a></b>		<b>UGC LISTED</b>
2	<b>Field Localization and Density Cavitation in Low-Beta Plasmas.</b>	<b>Rinawa, M., Chauhan, P., Kumar, Sintu., Singh, M. K., Singh, H. K., Sharma, A., &amp; Sharma, R. P.</b>	<b>Laser and Particle Beam</b>	<b>2021</b>	<b>02630346, 1469803X</b>	<b><a href="https://www.cambridge.org/core/journals/laserand-particlebeams">https://www.cambridge.org/core/journals/laserand-particlebeams</a></b>		<b>UGC LISTED</b>
3	<b>Enhancement in self-compression due to copropagating laser pulse in plasma.</b>	<b>Kumar Sintu, Gupta, P. K., Uma, R., and Sharma, R. P.</b>	<b>Optics Communications</b>	<b>2018</b>	<b>00304018</b>	<b><a href="https://www.journals.elsevier.com/opticscommunications">https://www.journals.elsevier.com/opticscommunications</a></b>		<b>UGC LISTED</b>
4	<b>High power terahertz emission in magnetized plasma via optical rectification of super-Gaussian laser beam</b>	<b>High power terahertz emission in magnetized plasma via optical rectification of superGaussian laser beam</b>	<b>Euro Physics Letters</b>	<b>2017</b>	<b>02955075, 12864854</b>	<b><a href="https://iopscience.iop.org/journal/0295-5075">https://iopscience.iop.org/journal/0295-5075</a></b>		<b>UGC LISTED</b>

5	Pulsecompression and self-focusing of Gaussian laser pulses in plasma having relativistic-ponderomotive nonlinearity	Kumar, Sintu, Gupta, P. K., Singh, R. K., Sharma, S., Uma, R., and Sharma, R. P.	Laser and Particle Beams	2017	02630 346, 14698 03X	<a href="https://www.cambridge.org/core/journals/laser-and-particlebeams">https://www.cambridge.org/core/journals/laser-and-particlebeams</a>		UGC LISTED
6	Selfcompression of two co-propagating laser pulse having relativistic nonlinearity in plasma	Kumar, Sintu, Gupta, P. K., Singh, R. K., Uma, R., and Sharma, R. P.	Laser and Particle Beams	2017	02630 346, 14698 03X	<a href="https://www.cambridge.org/core/journals/laserand-particlebeams">https://www.cambridge.org/core/journals/laserand-particlebeams</a>		UGC LISTED

14. Books and chapters in edited volumes/ books published

S.No	Title of the book	Title of the chapter	National /International	Year of Publication	ISBN number	Affiliating institute at the time of publication	Name of the publisher

15. Papers in national/international conference proceedings

S.No.	Title of the Proceeding of the conference	Name of the conference	National /International	Year of Publication	ISBN/ISSN Number of the proceeding	Affiliating institute at the time of publication
1	Self-Compression Of Femtosecond Laser Pulse In Plasma	Electrical Energy Safety and Conservation	National	2016	978-93-82825-51-7	IIT Delhi
2	Self-compression due to two laser pulse in plasma	International Conference on Advances in optics and photonic	International	2017	978-93-84871-109	IIT Delhi

16. Professional development Programmes, viz Orientation programme, Refresher course, Short term course, Faculty development Programmes

S. No	Year	Title of the Professional Development Programme	Date and Duration (from- to)
1	2020	4WeekInduction/OrientationProgrammefor"FacultyinUniversities/Colleges/InstitutesofHigherEducation, Grade A+	June 26-July 24,2020
2	2021	Refreshercourse,TwoWeekFacultyDevelopmentProgrammeDisciplinaryRefresherCourse(Physics), Grade A+	27/10/2021-10/11/2021

17. Research project sponsored by government agencies

S.No.	Name of the Principal Investigator	Name of the research project	Name of funding agency	Amount/Fund provided	Year of sanction	Duration of project	Status (completed/ongoing)

18. Research project sponsored nu non-government sources such as industry, corporate houses, international bodies

S.No.	Name of the Principal Investigator	Name of the research project	Name of funding agency	Amount/Fund provided	Year of sanction	Duration of project	Status (completed/ongoing)

19. Patents filed/granted

S.No.	Name of Patent filed/granted	Patent number	Year of filling/award/published of patent

20. Collaborative activities with other institutions/ research establishments/ industry for research and academic development

Title of the collaborative activity	Name of the Collaborating agency with contact details	Year of collaboration	Duration	Nature of activity

21. Functional MoUs with institutions/industries in India and abroad for internship, on the job training, project work, student/faculty exchange and collaborative research

Name of the organisation/industry With whom MoU is signed	Year of signing MoU	Duration of MoU	Actual activities Under each MoU Year wise

22. E-content is developed

- i - For e-PG- Pathshala, ii- For CEC (Under Graduate), iii- For SWAYAM, iv- For other MOOCs platform, v- For NPTEL/NMEICT/any other Government Initiatives

Name of the Module developed	Platform on which module is developed	Date of launching e content	Link to the relevant document and facility available in the institution	List of e-content development facility available	Provide link to videos of the media centre and recording facility
e-PG- Pathshala	DDUGU	2021	<a href="https://erp.ddugu.ac.in/epathshala_content.aspx">https://erp.ddugu.ac.in/epathshala_content.aspx</a>		
e-UG- Pathshala	DDUGU	2021	<a href="https://erp.ddugu.ac.in/epathshala_content.aspx">https://erp.ddugu.ac.in/epathshala_content.aspx</a>		

23. Consultancy and corporate training-

#### Consultancy

Name of consultancy Project	Consulting/sponsoring agency with contact details	Year	Revenue generated (Rs.)

**Corporate training**

Title of corporate training program	Agency seeking training with contact details	Year	Revenue generated (Rs.)	Number of trainees

**24. Details of Conference/Seminar attended-**

Year	Name of the Conference/workshop	International/ National/ State	Name of the professional body for which membership fee provided	Amount support (INR)

**25. Any other information:**