


Brief Biodata

Name: Dr. Shibu Saha

Designation:	Scientist	
DP No. and Name:	Optical Radiation Metrology (DP#1.04)	
DU No. and Name:	Physico Mechanical Metrology Division (DU#1.0)	
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Date of Joining CSIR-NPL:	09-02-2018	
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Research Area/ Interest

- Photometry and Radiometry
- Fabrication and Characterization of Optical Detectors
- Optical Vortex Beam

Educational Qualifications

(Please write latest qualification first)

Degree	Subject	University/ Institute	Year
Ph.D.	Physics	University of Delhi	2012
M.Sc.	Physics	University of Delhi	2006
B.Sc.	Physics	University of Delhi	2004

Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
Scientist	CSIR-NPL	February 2018	Till Date	Photometry; Radiometry; Optical Detectors; Singular Optics
Assistant Professor (adhoc)	Dyal Singh College, Univ. of Delhi	September 2013	September 2018	UG Teaching
Scientist-SC	U R Rao Satellite Centre, ISRO (then known as ISRO Satellite Centre)	August 2011	August 2013	Satellite Navigation; Radio occultation
Assistant Professor (adhoc)	Hansraj College, Univ. of Delhi	July 2010	June 2011	UG Teaching
SRF/JRF	Department of Physics &	September 2006	July 2011	Development and Characterization of

	Astrophysics, University of Delhi			Metal Oxide based Biosensors
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No. of Publications

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Books	Total
22	NIL	11	2 chapters (1 under production)	35

Selected Publications

<ol style="list-style-type: none"> 1. “Detection and correction of laterally misaligned optical setup for generation of symmetric perfect vortex beam” (2022). <i>Optik</i> (IF-2.443), 259, 168927. ISSN: 0030-4026. https://doi.org/10.1016/j.ijleo.2022.168927 2. “Metrological Traceability and Crucial Detector Characteristics for UVC Metrology in UVGI Applications” (2022). <i>MAPAN- Journal of Metrological Society of India</i> (IF-1.033), 37, 237. ISSN: 0970-3950. https://doi.org/10.1007/s12647-021-00527-0 3. “Theoretical Simulation for Evaluating Error in Irradiance Measurement using Optical Detectors having Different Cosine Responses” (2021). <i>MAPAN- Journal of Metrological Society of India</i> (IF-1.033), 36, 473. ISSN: 0970-3950. https://doi.org/10.1007/s12647-021-00486-6 4. “Effect of manganese doping on conduction in olivine LiFePO_4” (2017), <i>Journal of Material Science: Materials in Electronics</i> (IF-1.798), 28, 5192. ISSN: 1573-482X. https://doi.org/10.1007/s10854-016-6175-9 5. “Influence of native defects in ZnO thin films on its biosensing response characteristic” (2011), <i>Journal of Applied Physics</i> (IF 2.220), 110, 064904. ISSN: 0021-8979. https://doi.org/10.1063/1.3633212

Patents

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Current Activities

(Not more than 100 words)

<ul style="list-style-type: none"> • <i>Ongoing Project:</i> <ul style="list-style-type: none"> ○ Establishment of apex level LED Photometry Laboratory • <i>Research Activities:</i> <ul style="list-style-type: none"> ○ Studies for improving photometric and radiometric measurement capability ○ Development & Characterization of Optical Detectors ○ Perfect Vortex Beam

- Application of Singular Beam for Optical Communication
- Photometry & Radiometry: Study of visual and nonvisual effects including effects of LED lighting systems; Flux measurements; UV Radiometry
- *Calibration and Measurement Services:*
 - Studies for establishing and maintaining traceability of various Photometric and Radiometric parameters
 - Uncertainty Analysis
 - Management of Quality System

Honour(s)/Award(s)/ Fellowship(s)

Contributions to AcSIR

1. Assistant Professor in the Faculty of Physical Science
2. Faculty in Courses: PG Diploma Course on Precision Measurement and Quality Control (PGD-PMQC) course for Optical Radiation Metrology
3. Supervision of Doctoral Thesis under progress: 02

Membership of Professional Societies/ Institutions

Life Member, Metrology Society of India (MSI).

Any other Information

(Not more than 100 words)