


Brief Biodata

Name: Surya Kumar Gautam

Designation:	Scientist	
DP No. and Name:	1.05, Force and Hardness Metrology	
DU No. and Name:	1, Physico-Mechanical Metrology Division	
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Date of Joining CSIR-NPL:	01/01/2021	
Phone (office)	8674	
Mobile (optional)	-	

Research Area/ Interest

My research areas are computational imaging techniques such as phase retrieval iterative algorithms, holography for 3D object reconstruction, and Object deformation measurement due to thermal and mechanical loading.

Educational Qualifications

(Please write latest qualification first)

Degree	Subject	University/ Institute	Year
Doctor of Philosophy (Ph.D.)	Optical Imaging	Indian Institute of Space Science and Technology (IIST), Trivandrum	[2016-still pursuing]
Master of Technology (M.Tech.)	Applied Optics	Indian Institute of Technology, Delhi	[2013-15]
Bachelor of Engineering (B.E.)	Electronics and Communication Engineering	Delhi Technology University formerly (Delhi College of Engineering, University of Delhi)	[2008-12]

Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
Scientist	CSIR-NPL	01/01/2021	Currently	Force, torque and Hardness
Ph.D.	IIST	03/08/2016	Still pursuing	Optical Imaging

No. of Publications

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Books	Total
7	--	12	--	19

Selected Publications

- Surya Kumar Gautam, Rakesh Kumar Singh, C. S. Narayanamurthy, and Dinesh N. Naik, "Single-shot and twin-image free unique phase retrieval using an aspect of autocorrelation that considers the object asymmetry," J. Opt. Soc. Am. A 37, 1826-1831 (2020).
- Surya Kumar Gautam, R. Kumar Singh, C. S. Narayanamurthy, and D. N. Naik, "Reconstruction of complex-object using edge point referencing," J. Opt. 22, 055601 (2020).
- Vipin Tiwari, Surya Kumar Gautam, Dinesh N. Naik, Rakesh Kumar Singh, and Nandan S. Bisht, "Characterization of a spatial light modulator using polarization-sensitive digital holography," Appl. Opt. 59, 2024-2030 (2020).
- Shalabh Mishra, Surya Kumar Gautam, Dinesh N Naik, Ziyang Chen, Jixiong Pu, and Rakesh Kumar Singh, "Tailoring and analysis of vectorial coherence," 2018 J. Opt. 20 125605.
- Ramesh C. Sharma, Subodh Kumar, Surya Kumar Gautam, Saurabh Gupta, Deepak Kumar, Hari B. Srivastava, "Detection of Ultrasonic Waves Using Resonant Cylindrical Cavity for Defense Application," published in IEEE Sensors Journal, Vol. 17, Issue. 6, Jan 2017.
- Ramesh C. Sharma, Subodh Kumar, Surya Kumar Gautam, Saurabh Gupta, Hari B. Srivastava, "Photoacoustic sensor for trace detection of post-blast explosive and hazardous molecules," published in Sensors and Actuators B: Chemical, Vol. 243, Pages 5963, May 2017.
- Deepak Kumar, Surya Kumar Gautam, Subodh Kumar, Saurabh Gupta, Hari B. Srivastava, Surya N. Thakur1, Ramesh C. Sharma, "Ultrasensitive photoacoustic sensor based on quantum cascade laser spectroscopy" published in Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, Vol. 176, Pages 4751, April 2017.

Patents

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Current Activities

(Not more than 100 words)

We calibrate, establish and maintain primary standards of Force, Torque and Hardness. We are also part of implementation of quality management system and fulfilling its requirements. Apart from this, we generate ECF by providing traceability to the whole nation.

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

- Secured 6.5 band scored in International English Language Testing System (IELTS-Acadmic) exam.[2017]
- National Eligibility Test / Junior Research Fellowship (CSIR NET/JRF) exam cleared. [2015]
- Ranked 1st among master's students specializing in Applied Optics. [2013-15]
- Cleared Graduate Record Examination (GRE-Subjective) exam in Physics discipline. [2014]
- Graduate Aptitude Test in Engineering (GATE) cleared in Physics discipline. [2013]
- Cleared All India Engineering Entrance Examination (AIEEE) exam. [2008]

Contributions to AcSIR

Membership of Professional Societies/ Institutions

Lifelong membership for Metrology Society of India (MSI).

Any other Information

(Not more than 100 words)

One year research experience in LASTEC, Defence research and development organization (DRDO), Delhi, India.