


## Brief Biodata

**Name: Dr. Jasveer Singh**

<b>Designation:</b>	Technical Officer	
<b>DP No. and Name:</b>	1.06 and Pressure, Vacuum & Ultrasonic Metrology Section	
<b>DU No. and Name:</b>	1.0 and Physico-Mechanical Metrology Division	
<b>Email:</b>	<a href="mailto:singhjs@nplindia.org">singhjs@nplindia.org</a>	
<b>Date of Joining CSIR-NPL:</b>	12.09.2007	
<b>Phone (office)</b>	011-47091668	
<b>Mobile (optional)</b>		

### Research Area/ Interest

Pressure Metrology, Measurement Uncertainty, Monte Carlo Simulation for estimation of measurement uncertainty, Pneumatic Pressures, ISO 17025:2017, Finite Element Analysis, Raman spectroscopy under high pressures and low temperatures.

### Educational Qualifications

*(Please write latest qualification first)*

Degree	Subject	University/ Institute	Year
Ph.D.	Engineering	I.I.T. (ISM) Dhanbad	2021
B.E. (AMIE)	Mechanical Engg.	The Institution of Engineering (India)	2012
M.B.A.	Marketing & HR	Sikkim Manipal University	2008

### Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
Tech. Officer	CSIR-NPL	Sept. 2014	Till date	Pressure Metrology, Raman Spectroscopy, Simulation
Technical Assistant	CSIR-NPL	Sept. 2007	Sept. 2014	Pressure Metrology, Raman Spectroscopy, Simulation

## No. of Publications

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Books	Total
30	4	31	-	65

## Selected Publications

- 1) “A Monte Carlo simulation investigation on the effect of the probability distribution of input quantities on the effective area of a pressure balance and its uncertainty”, **Jasveer Singh**, LA Kumaraswamidhas, Neha Bura, and Nita Dilawar Sharma, *Measurement*, 172, 108853 (2021).
- 2) “Characterization of a standard pneumatic piston gauge using finite element simulation technique vs cross-float, theoretical and Monte Carlo approaches”, **Jasveer Singh**, LA Kumaraswamidhas, Neha Bura, Shanay Rab and Nita Dilawar Sharma, *Advances in Engineering Software* 150 (2020) 102920.
- 3) “Investigation of contribution of number of trials in Monte Carlo simulation for uncertainty estimation for a pressure balance”, **Jasveer Singh**, Neha Bura, Kapil Kaushik, LA Kumaraswamidhas and Nita Dilawar Sharma, *Transactions of the Institute of Measurement and Control*, DOI: 10.1177/01423312211039065 (2021).
- 4) “Temperature-Dependent Phonon Behavior in Nanocrystalline Tm<sub>2</sub>O<sub>3</sub>: Fano Interference and Phonon Anharmonicity”, Neha Bura, Ankit Bhooriya, Deepa Yadav, **Jasveer Singh**, and Nita Dilawar Sharma, *The Journal of Physical Chemistry C*, 125, 33, 18259-18269 (2021).
- 5) “Influence of varying thermodynamic parameters on the structural behavior of nanocrystalline Europium Sesquioxide”, Neha Bura, Deepa Yadav, Ankit Bhooriya, **Jasveer Singh** and Nita Dilawar Sharma, *Journal of Alloys and Compounds*, 856, 158129 (2020).

## Patents

Nil

## Current Activities

(Not more than 100 words)

- Maintenance of National Pneumatic primary and secondary pressure standards and its dissemination through apex level calibration.
- Raman spectroscopy at ambient, Temperature dependent Raman studies using liquid nitrogen or liquid helium cryostat.
- Training in pneumatic metrology.
- Maintenance of lab and documents as per ISO/IEC 17025:2017
- Monte Carlo Simulation for the estimation of measurement uncertainty.
- Finite element analysis of piston-cylinder assembly.

### **Honour(s)/Award(s)/ Fellowship(s)**

1. Certificate of Excellence for outstanding contribution in research/publishing/ engg. work in the field of Mechanical Metrology by CSIR-NPL in 2022.
2. Best Paper award for poster presentation entitled “Computation of uncertainty of effective area of a piston gauge using Monte Carlo method” in National Conference on Advances in Metrology (AdMET) by Metrology Society of India (MSI) and Springer in 2017.

### **Contributions to AcSIR**

Technical support to the Research scholars in the experimental work.

Training to the PMQC students, scholars, M.Tech. students etc.

### **Membership of Professional Societies/ Institutions**

1. Life Member of Metrology Society of India (MSI).
2. Member of International Association of Engineers (IAENG), Hong Kong.
3. Associate Member of The Institution of Engineer (India).

### **Any other Information**

*(Not more than 100 words)*

NIL