


Brief Biodata

Name: Dr. Rajesh Kumar

Designation:	Senior Principal Scientist	
DP No. and Name:	1.05, Force and Hardness Metrology	
DU No. and Name:	1, Physico Mechanical Metrology Division	
Email:	kumarr@nplindia.org	
Date of Joining CSIR-NPL:	05.09.1989	
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Research Area/ Interest

- Research and development in field of force / torque/ hardness metrology by continuously up gradation and maintenances of Apex level standards of force, torque and hardness parameters.
- Development of indigenous force/torque transducers.
- Dissemination of standards to user industries / calibrating laboratories through calibration and testing with improved uncertainty to maintain traceability chain of force, torque and hardness measurement in the country
- Actively involvement in activities related to fulfillment of organization / group mandate as per the quality system based on ISO/IEC 17025.

Educational Qualifications

(Please write latest qualification first)

Degree	Subject	University/ Institute	Year
Ph.D.	Mechanical Engineering	Delhi Technical University, Formerly known as Delhi College of Engineering, Bhawana Road, Shahabad Daulatpur , Rohini, New Delhi- 110042	2019
B.E.	Mechanical Engineering	Jamia Millia Islamia, Okhla, N. Delhi	1996

Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
Junior Scientist	CSIR-NPL	22-07-1997	21-07-2001	Force, Torque & Hardness Metrology
Scientist	CSIR-NPL	22-07-2001	21-07-2006	Do
Senior Scientist	CSIR-NPL	22-07-2006	21-07-2010	Do

Principal Scientist	CSIR-NPL	22-07-2010	21-07-2015	Do
Sr. Principal Scientist	CSIR-NPL	22-07-2015	Till Date	Do

No. of Publications 47

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Books	Total
19	4	23	Book chapter for Book “Metrology for Inclusive Growth of India” published by Springer Chapter -9: ‘Physico-Mechanical Metrology –Part IV’ Force, Pressure & Flow Metrology, PP 377-456.	47

Selected Publications

- R Kumar, Shanay Rab B. D. Pant and S Maji, Design, development and characterization of MEMS Silicon diaphragm force sensor, 2018, Vaccum, Sweden, 153, 211-216
- R Kumar, Shanay Rab , B. D. Pant, S Maji and R. S. Mishra, FEA based design studies for development of diaphragm force transducers, 2018, Mapan, India, doi.org/10.1007/s12647-018-0292-2
- Rajesh Kumar and S. Maji, Force transducers- A review of design and metrological issues, International Journal Engineering Solid Mechanics of Growing Science, USA, Engineering solid mechanics 4(2016)81-90, 10.5267/j.esm.2015.12.001
- R Kumar, B D Pant and S Maji, Design, Development and Metrological Characterization of a Force Transducer, Journal of Scientific & Industrial Research, India, Vol.75, May 2016 ,pp.320-321

Patents

NA

Current Activities

(Not more than 100 words)

- Continuously striving for the up gradation of the measurement standards and always seeking for opportunity to participate in the inter-comparison exercises of the established maintained standards for better CMC values in our field in order to build up the confidence level in our measurement system.
- Dealing with calibration requirements/calibration related problems of our customers in force, torque & hardness parameters. Knowledge is imparted time to time by our regular training programs about any new changes of IS/ISO standards, related to our field parameters, measurement uncertainty calculations including preparation of uncertainty budgets, quality system requirements as per ISO/IEC 17025:2017.

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

- The force and hardness metrology section achieved the highest ECF earning group award at the CSIR-NPL foundation day in September 2018.

Contributions to AcSIR

- Lectures delivered against AcSIR Ph.D. course work subject “Optimization techniques & finite element method in Engineering”
- Lectures delivered for PMQC Course

Membership of Professional Societies/ Institutions

- Life Member of Metrology society of India, NPL

Any other Information

(Not more than 100 words)

- Regularly participated/ involved in Technical, Academic and Administrative committees of CSIR-NPL.