


Brief Biodata

Name: Dr. S. Seela Kumar Titus

Designation:	Chief Scientist	
DP No. and Name:	1.05; Force and Hardness Metrology	
DU No. and Name:	Physico Mechanical Metrology	
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Date of Joining CSIR-NPL:	2 nd December 1996	
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Research Area/ Interest

The role of Force, Torque and Hardness Metrology is very important to achieve the quality assurance in various engineering sectors of the country such as Infrastructure, Space, Automotive, Aviation, Defense, Energy, Mining, Metallurgy, etc. The Indian Cement Industry is one of the booming sectors for the economic development of the country and next comes the iron and steel industry. So, my area of research interest is to establish, develop, upgrade and maintain the national standards and to provide the necessary traceability to all the stakeholders across the county in order to fulfil the mandate of the laboratory. Also, as the need to realize small forces has become very much essential, creating a facility for low force measurement in mN and μ N ranges for the benefit the industries and organizations where the application of such small forces require traceability. Establishing calibration facility for higher force ranges up to 5 MN and impact testing facility for the industrial requirements.

Educational Qualifications

(Please write latest qualification first)

Degree	Subject	University/ Institute	Year
Ph.D	High Pressure and Thermal Crystallization studies of Arsenic Based Chalcogenide Glasses	Indian Institute of Science, Bangalore	1992
M.Sc	Physics	Madras Christian College Madras University	1985
B.Sc	Physics, Mathematics and Chemistry	The American College, Madurai Kamaraj University	1983

Academic / Research Experience

Grade / Post	Institute	Duration		Research Field
		From	To	
Chief Scientist	CSIR-NPL	01Jan. 2021	Till date	Force, Torque and Hardness Metrology
Sr. Pr. Scientist	CSIR-NPL	01Jan. 15	31/12/2020	
Pr. scientist	CSIR-NPL	01Jan. 10	31/12/2014	
Sc- EI	CSIR-NPL	01Jan.06	31/12/2009	
Sc-C	CSIR-NPL	01Jan.01	31/12/2005	
Sc-B	CSIR-NPL	02Dec. 96	31/12/2000	
Pool Officer	CSIR-NML	Jan.96	30/11/1996	
Lecturer	KIT, Coimbatore	June 1995	Jan.1996	

Monbusho Fellow	Gifu Univ. Gifu, Japan	Feb.94	March 1995	
Research Associate	I.I.Sc, Bangalore	July 92	Jan.1994	

No. of Publications

No. of Publications in SCI Journals	No. of Publications in non-SCI Journals	No. of Publications in Conference Proceedings	Books	Total
60	15		Chapters 5	80

Selected Publications

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Patents

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Current Activities

(Not more than 100 words)

As Head of the Force and Hardness metrology section, I am taking care of the day to day activities of the section. Establishing, upgrading and maintaining the primary and secondary standards in these parameters at par with the other leading National Metrology laboratories across the world. Providing the APEX level traceability in Force, Torque and Hardness measurements to several strategic sector which includes, ISRO, DRDO, Civil Aviation, HAL, Air force, CSIR, DAE, Railways, Automobile sectors, etc., generating ECF of about Rs. 1.5 Cr per annum.

I am the PI of a CSIR funded Facility Creation Project of Rs.12.57Cr entitled “Strengthening Metrological Activity for Research and Technology in Physico-Mechanical Parameters (SMART-PM)”. This project is being formulated for strengthening the various metrological activities under the Physico mechanical division.

As the TCM Chair, I am coordinating all the activities such as Calibration and Measurement Capability review (CMC), inter-comparisons, peer review, etc., pertaining to the mass related quantities (mass, density, viscosity, gravity, force, torque, hardness, pressure and vacuum) of all the National Metrology Institutes in the APMP region.

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

Contributions to AcSIR

I have taught Engineering Materials course to the students,
PMQC course to the Students
Guiding Ph.D student and also DAC member for several Ph.D Students

Membership of Professional Societies/ Institutions

Metrology Society of India
Ultrasonic Society of India

Any other Information

(Not more than 100 words)

APMP has 12 Technical committees (TCs) responsible for coordinating all the technical activities for each field covered by the CIPM and each of these TCs are managed by a Chair Person elected for each TCs. The TCM (Technical Committee for Mass) is one of the technical committees which covers all the mass related parameters such as mass, force, torque, hardness and pressure in the APMP region

I am the present TCM-Chair and have got elected for this position, which a prestigious thing for CSIR-NPL.