

Curriculum Vitae

Name : Dr. Nambakkat Lakshmi Radhakrishnan

Designation : Professor

Date of Birth : 6-5-1962

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Date of Appointment

(i) Assistant Professor : 2-1-1992

(ii) Associate Professor : 17-5-2007

(iii) Professor : 30-9-2011

Area of Specialization : Condensed Matter Physics – Nanomagnetism

Total Teaching Experience

Under-graduate : 22 years (main topics : Optics, Mechanics, Modern Physics)

Post –graduate : 20 years (topics : Classical Mechanics, Electrodynamics, Materials Science)

Course design : Developed syllabus for theory and practicals for Materials Science special paper in M.Sc.

Research Experience as Supervisor from July, 2000

- ✚ Ph. D. Completed – 6 (upto 2014)
- ✚ Registered for Ph.D – 4 (upto 2014)

Academic Qualifications

Exam. Passed	Board/University	Subjects	Year	Marks/Grade etc.
High School	Central Board of Secondary Education	All	1978	Marks = 70.9%
Higher secondary or Pre-Degree	Central Board of Secondary Education	All	1980	Marks = 73.8%
B.Sc	University of Calicut	Physics (Main) Math & Chem (Subsidiary)	1983	Marks = 79.2%
M.Sc	University of Calicut	Physics	1985	Marks = 68.4% (University Third rank)
Ph.D	Mohanlal Sukhadia University, Udaipur	Physics	1992	-----
Others	1.UGC National Educational Test (NET)	Physics	1985	
	2. CSIR JRF	Physics	1985	
	3.Common Examination for Research Admission (CERA85)	Physics	1985	86.11 percentile score

Summary of Research Work being carried out

I belong to the hyperfine interactions and nanomagnetic materials group which uses the hyperfine interactions method (Mössbauer effect) for microscopic investigations of materials. The group also measures bulk magnetic properties using VSM and undertakes magneto resistance measurements in bulk and multilayers of nanostructured magnetic materials. Theoretical simulations using band structure calculations are also being done. The following materials are synthesized and studied:

- ✚ Spintronics materials mainly Fe and Co based Heusler alloys
- ✚ Magnetic oxides mainly Fe and Mn based oxides
- ✚ Multilayers and thin films of alloys and oxides

In addition to minor facilities, the following major equipment are available in the department which are being utilized by our group

- ✚ Mössbauer Spectrometer (Austin Inc.) - Transmission Geometry
- ✚ Lakeshore Model 7400 Vibration Sample Magnetometer
- ✚ SPEX 8000M High Energy Ball Mill
- ✚ X-ray Diffractometer (Rigaku Miniflex)

Participation in seminars/symposia/workshops etc. (From 2000-2014)

15 International and 12 National

Research Projects (Total grants = 42.24 lakhs)

	Title of Project	Funding Agency	Period of project (dates)	Amount
1.	Magnetic properties of bulk and nano-sized ternary intermetallic materials for spintronics applications	UGC, New Delhi	2009-2012	10.48 Lakhs
2.	Study in Hyperfine fields in Fe-TM-Al Films and multilayers	UGC-DAE-CSR, Indore	2006- 2009	3.00 Lakhs
3.	Magnetic and Transport Properties of functional nano sized Fe and Cr based spinels	DAE-BRNS, Mumbai	2012-2015	21.53 Lakhs
4.	Magnetic Properties of Co-based Multilayer system	Collaborative Research Scheme with UGC-DAE-CSR, Indore	2010-2014	7.23 Lakhs

Visits abroad (for academic purposes):

1. ICTP, Trieste, Italy, March 1990
2. Sultan Qaboos University, Muscat, Oman, 2003
3. Gebze Institute of Technology, June, 2007
4. Institute of High Performance Computing, Singapore, July, 2007
5. Kuwait University, Kuwait, April, 2009
6. Technical University, Vienna, Austria, July 2009
7. Katholieke Universiteit (Catholic University) Leuven, Belgium, July 2009
8. California State University, Northridge, California, USA

Member of professional bodies

- ✚ Member of Materials Research Society (MRS) USA (membership id number 00280379) up to 2012
- ✚ Indian Society for Radiation Physics, India

Reviewer for the following International Journals

- ✚ Journal of Magnetism and Magnetic Materials (Elsevier)
- ✚ Physica B (Elsevier)
- ✚ Materials Research Bulletin (Elsevier)
- ✚ Journal of Alloys and Compounds (Elsevier)
- ✚ Hyperfine Interactions (Springer)
- ✚ Intermetallics (Elsevier)
- ✚ Journal of Physics D (IOP)
- ✚ American Mineralogist
- ✚ Journal of Alloys and Compounds (Elsevier)
- ✚ Materials Science and Engineering (Elsevier)
- ✚ Applied Surface Science (Elsevier)
- ✚ Thermochimica Acta (Elsevier)
- ✚ Journal of Physics and Chemistry of Solids (Elsevier)
- ✚ Examiner for Ph.D theses from various Universities in India.

Details of seminars, conferences, symposia organized

- ✚ Organized a workshop on nanostructured materials (WNM-09) on 24th October, 2009
- ✚ Member of local organizing committee of 18th National Symposium on Radiation Physics (NSRP-18), November 9-21, 2009

PUBLICATIONS (Covering whole career)

Research papers published in refereed journals (total 72)

Highest impact factor : 3.767 (Physical Review B), H-index :11, Citations : 346

- ✚ Peer-Reviewed Journals (a) International : **52** (b) National : **08**
- ✚ Conference Proceedings (Peer-Reviewed): **12**

Research Collaborations:

A. With other institutions : UGC-DAE CSR, Indore, NCL, Pune, BARC, Mumbai, Panjab University, Chandigarh, M S University, Baroda, University of Rajasthan, Jaipur, Calicut University, Calicut, Nirmalagiri College etc.

B. Within MLSU : Departments of Botany and Geology

Other responsibilities:

- ✚ Co-ordinator, UGC centre for Nanoscience and Advanced Materials
- ✚ Deputy Co-ordinator, DST-FIST (Level –II)
- ✚ Member of the IQAC cell of Mohanlal Sukhadia University, Udaipur
- ✚ Coordinator, Ph.D Course Work in the Faculty of Science