

Profile of Prof. N. C. Shivaprakash



CONTACT DETAILS:

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PERSONAL DETAILS

- Born on 4th June 1955.
- **Formerly at the Department of Instrumentation and Applied Physics, Indian Institute of Science, Bangalore 560012**

CURRENT AFFILIATIONS

- Chief Academic Mentor - Dr AIT, Bangalore (2021 –
- BoG, Member - MTU, Imphal, Manipur (2026 -
- BoG Member - IIIT, Kottayam (2025 -
- Emeritus Professor - Sharda Univ Noida (2025 -
- Emeritus Professor - CoEP Tech Univ Pune (2023 -
- Adjunct Professor - NIT Meghalaya (2022 –2025)
- Adjunct Professor - NIT Jullundur (2021 -2023)
- Emeritus Professor - VTU , Belguam (2020 –
and Advisor

ACADEMIC QUALIFICATION

- Bachelor's and Master's degrees in 1976 and 1978 from Mysore University.
Ph.D degree in 1982 from the Mysore University

AREA OF RESEARCH

- Electronic Instrumentation, Analytical Instrumentation, Embedded systems and Development of a high-pressure DTA and its applications, cryo cooler based Cryosorption Pumps, conducting polymers and OLEDs.
- Completed many R & D and consultancy projects funded by DRDO, ISRO, DST, UGC and CSIR.

R and D PROJECTS

Has developed many Instruments which have potential applications in the space program, fusion applications and defense research. A few of the development works are listed here.

- A novel high-pressure Differential Thermal Analyzer (DTA) has been developed. This is an analytical instrument developed indigenously as commercial ones are very expensive. The developed instrument is used at very high pressures and temperatures. This has been extensively used in the phase transition studies of chalcogenide materials.
- Organic Light emitting diodes (OLEDs) have potential applications in saving power consumption. Fabrication of Organic Light emitting diodes using polymeric anode has been done. Also, designed and developed Electrochromic conducting polymers for smart pixel display applications.
- Developed a cryocooler-based high-efficiency cryosorption pump whose pumping speeds are higher at least by a factor of 1.5 compared to the commercial pumps in specific pressure ranges. This uses a material of high adsorbing capacity along with an adhesive of high thermal conductivity. The developed pump will be pretty helpful for fusion applications.
- Design and fabrication of flexible cryogenic transfer lines to transfer Liquid Helium and Liquid Nitrogen to end applications has been successfully done. This development work is beneficial for fusion applications.
- Magnetic sensors play a major role in electric vehicles. Developed monolithic thin film magnetic sensors with a combination of Anisotropic Magneto Resistance and Planar Hall Effect for 360 angle and Giant Magneto Resistance for turn counting. Development of a multi-turn sensor with magnetic, nano-wire is under progress. A multinational company Honeywell is involved in this work with our group.

RESEARCH PUBLICATIONS

- Over the last 42 years of my research career, contributed substantially by publishing and presenting **over 170 papers** in reputed International and National journals.

PROFESSIONAL AFFILIATIONS

- **Senior member of IEEE (USA)**
- Fellow of the Institution of Electronics and Telecommunication Engineers,
- Fellow of the Institution of Engineering and Technology,
- Fellow of the Instrument Society of India.

AWARDS, MEDALS & RECOGNITION

- Master examination with **I RANK** and got 5 Gold Medals,
- Recipient of the **Young Scientist Award** (1983) of the Karnataka Association for Advancement of Science

RESPONSIBILITIES

- Chairman/expert member in committees of MoE, AICTE, NBA, NAAC and UGC New Delhi.
- Member of Selection Committees of many IITs, NITs and Universities.
- Chairman/member of Governing councils, Senate and Academic Councils of Institutions of repute and Universities.
- Referee/ Reviewer of many International and National Scientific Journals
- Member of Joint Review Mission of World Bank TEQIP project,
- Mentor and performance auditor of TEQIP-funded Institutions.
- Delivered many keynotes and **invited** talks at International and National conferences in India and abroad.

Visited USA, Canada, Germany, Netherlands, UK, Sweden, France, Russia, Ukraine, Poland, Japan, Berlin, Indonesia, Singapore, Spain, Myanmar, Jakarta, Thailand, Malaysia, China and Hong Kong