

Name & Affiliation

Dr. Ribu Mathew

Associate Professor, Manipal School of Information Sciences,
Manipal Academy of Higher Education, Manipal



Research Experience

- Contributed in the field of design, modelling and fabrication of NEMS technology piezoresistive readout based nano cantilever sensors for chemical and biological sensing applications.
- Worked in computational modelling using FEM CAD tools on fabrication of sensors funded by GoI and fabrication of sensor was done in CeNSE, IISc Bangalore.
- Works in collaboration with GoI institutes like CMTI for development of MEMS sensors.
- Worked in industrial standard NEMS device
- Experience and training in NEMS/IC layout tools, and clean room fabrication technologies from CeNSE, IISc Bangalore.

Current Projects and Expertise

- MEMS design tools: IntelliSuite
- ECE/ VLSI Circuit level: Cadence virtuoso, Mentor graphics, Tanner EDA, e-Sim, P-spice, LT spice, experience in layout 180 nm and post-layout simulations
- Device level: TSUPREM-II and TSUPREM-IV in TCAD
- Professional layout tools: Clewin, LASI
- Exposure to photolithography, deposition, doping and etching techniques
- Standardization of two step thermal diffusion process
- Prototype development of multi-layer (4 layered) 6 mask process MEMS piezoresistive cantilever sensor

Research interests

- Design, modelling and fabrication of NEMS micro/nano cantilever and diaphragm sensors
- Bio-MEMS
- VLSI analog/RF IC design
- Device modelling

Publication id

- More than 62 publications as reputed journal papers, books, book chapters, and conference papers (with cumulative IF more than 86 and h-index: 10).
- Scopus ID: 56605911500
- Google scholar link: <https://scholar.google.co.in/citations?user=-K-408cAAAAJ&hl=en&authuser=1>

Contact

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