



Preface for the special issue on “MEMS and Sensors”

Enakshi Bhattacharya¹ · Amitava DasGupta¹

Published online: 28 November 2015
© Indian Institute of Technology Madras 2015

This special issue on MicroElectroMechanical Systems (MEMS) and Sensors has a few selected papers from the presentations at the International Conference on MEMS and Sensors (ICMEMSS 2014) held during 18–20 December 2014 at IIT Madras and contains two reviews and four contributed papers.

The first review by Psychogiou and Peroulis, in the area of radio frequency micro-electro-mechanical systems (RF MEMS), reports on recent advances in reconfigurable waveguide-resonator based filter architectures which will contribute greatly to the area of multi-frequency and multi-standard communication services. The second review by Packirisamy et al. uses conventional and lab-on-a-chip technologies for the detection of bovine growth hormone, an unfortunate practice in the dairy industry frowned upon but prevalent in many countries.

The two reviews are followed by four contributed papers. The first two papers are on MEMS followed by two papers on Sensors. The paper by Mohanty et al. discusses a bulk micromachining technique that restricts the device area. Angira et al. report on RF MEMS switches for multi-band wireless applications. The paper by Das et al. discusses improved binding capability of antibody on graphene coated nanoporous silicon as compared to standard functionalisation methods. And the last paper by Trivedi and Nemade reports on the simulation of a Love wave resonator using coupled resonance with ZnO nanorods for biosensing applications.

The area of MEMS and Sensors is vast and it would be impossible to contain that in one issue. Our emphasis for the conference was on processes, technology and devices and we hope this small and eclectic collection of papers for the special issue will be useful for our community.

✉ Enakshi Bhattacharya
enakshi@ee.iitm.ac.in

Amitava DasGupta
adg@ee.iitm.ac.in

¹ Department of Electrical Engineering, Centre for NEMS and Nanophotonics, Indian Institute of Technology Madras, Chennai 600036, India