

Short Resume of Professor T.S. Kalkur

Dr. Kalkur received his B.S. degree from the University of Mysore in 1975 and his M.Tech. degree from the Indian Institute of Science in 1979. He then went to the University of Western Australia where he received his Ph.D. degree. He began his career at UCCS in 1985 as a visiting Assistant Professor, and is now a Professor and chair for the Department of Electrical and Computer Engineering. He presently is the director of the UCCS Microelectronics Research Laboratories. During his sabbatical, he worked at Hewlett Packard Laboratories, Atmel Corporation and Vitesse Semiconductors. Dr. Kalkur's research interests are in microelectronics circuit design, device physics, ferroelectrics and ferroics for tunable RF circuit applications, polarization switching data converters and DC-DC converters, tunable RF resonators, wireless based structural health monitoring using SAW devices, FBAR based resonators, filters and duplexers, MEMS based sensors and switches, and radiation hardened circuit design. He has graduated 20 Ph.D's, over 80 MSEE students, published over 320 research papers with 5 patents. He has presented numerous invited talks in international conferences.

Research

Dr. Kalkur has ongoing research: "Environmental Health Monitoring using SAW sensors", Phase II STTR with Naval Research Lab through Albido Inc., "MOCVD deposited BST for tunable RF resonator", Phase II STTR with Army Research office through Structured Materials Industries (completed in March 2015), Graphene earphones for noise cancelling, Phase I, STTR, Army research office, through Structured Material Industries.

Recent Publications

1. N.M. Sbrockey, Gary S Tompa, T.S. Kalkur, S.P. Alpay, J. Zhang and M.W. Cole "Voltage Induced Acoustic Wave Resonance in MOCVD Deposited SrTiO₃ Thin Film" J. Vac. Sci. and Technology, B 30, 061202(2012).
2. T.S. Kalkur, N.M. Sbrockey and G.S. Tompa, "Solidly mounted FBAR with MOSD deposited BST", Journal of Nano Technology and Surface Science, vol.10, 558-560(2012)
3. K.M. Web and T.S. Kalkur, "A Circuit Based Approach for the Compensation of Self-Heating-Induced Timing Errors in Bipolar Comparators", IEEE BCTM, Portland, 1-4, 2012.
4.) Yulan Zhanng and T.S. Kalkur, "Modeling and Analysis of distortion in Ferroelectric Varactors", Journal IEEE Transactions on Ultrasonics and Ferroelectrics, vol.56, no. 6, 1263-1266 (2010).
5. Abu Kabir and T.S. Kalkur, "Spread Spectrum Clock Generation using Ferroelectric Capacitor tuned VCOs,", IEEE Transactions on Ultrasonics and Ferroelectrics, vol.60, no.8, 1638-1645 (2013).
6. S. Alzaharani and T.S. Kalkur, "Tunable matching circuit for SAW devices with BST capacitors", Integrated Ferroelectrics, Volume 157, Issue 1, pages 114-121, 2014.