

## Guest Editorial

**T**HIS YEAR'S TRANSACTIONS's Mini-Special Issue presents a great selection of papers whose origins are from the 2002 IEEE Microwave Theory and Techniques Society (IEEE MTT-S) RF Integrated Circuits (RFIC) Symposium. This Mini-Special Issue begins with several integrated radio papers. First, we present a survey paper by Loke and Ali, which discusses issues, status, and trends on what is rapidly becoming the dominant architecture for low-cost integrated radios, i.e., direct conversion. We then present a paper by Tatu *et al.*, which discusses a *Ka*-band direct digital receiver, highlighting the trend toward integration even in microwave bands. Demonstrating the growing trend of RF CMOS for wireless applications, the paper by Dasgupta *et al.* discusses a WCDMA transmit/receive chip set developed in a low-cost 0.35- $\mu\text{m}$  CMOS process. We then present two circuit papers, one by Xiao *et al.*, which addresses the reliability issues for CMOS voltage-controlled oscillators (VCOs) and the other by Kim *et al.*, which discusses an active predistortion technique to boost linearity and efficiency of high-power amplifiers.

This Mini-Special Issue then concludes with two modeling papers. The paper by Tang *et al.* addresses SiGe heterojunction bipolar transistor (HBT) low-frequency noise optimization, while the paper by Islam and Anwar discusses large-signal modeling of GaN MESFETs. These papers represent an excellent cross section of the material presented at the IEEE MTT-S RFIC Symposium and allow the authors to expand on the key ideas presented at the conference. I hope you find this TRANSACTIONS' Mini-Special Issue both valuable and rewarding. Please join us next year in Philadelphia, PA, for the 2003 IEEE MTT-S RFIC Symposium. There will be a great selection of presentations on the latest advancements in RFICs, plus workshops, tutorials, and panel sessions on the most challenging issues facing the wireless industry.

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