

# Guest Editorial

**W**ELCOME to this TRANSACTION's Mini-Special Issue featuring expanded papers selected from the 2003 IEEE Microwave Theory and Techniques Society (IEEE MTT-S) RF Integrated Circuits (RFIC) Symposium. This year's symposium saw a significant increase in paper submissions, covering a wide range of RFIC related topics, leading to a record number of accepted papers being presented in oral and open-forum formats. This Mini-Special Issue captures eight of those papers in a less restrictive length format, giving authors the ability to expand on key ideas and results presented at the conference. This Mini-Special Issue begins with several design- and architecture-oriented papers. The paper by Staszewski *et al.* present advances in implementing digitally controlled oscillator circuits with application to BLUETOOTH transceivers. A demonstration chip is fabricated in a 0.13- $\mu\text{m}$  digital CMOS process. Issues in deembedding scattering and noise parameters in SiGe HBTs is approached by Liang *et al.* In the area of low-noise amplifier (LNA) circuits, Ma *et al.* demonstrate an LNA realized in an SiGe process BiCMOS process where the circuit uses both bipolar and MOSFET devices. The paper by Ishii *et al.* highlights advances in developing low-power multiplexer and demultiplexer circuits for 50-Gbit/s high-speed data op-

tical applications. The paper by Deng *et al.* focuses on distributed amplifier circuits emphasizing high gain over multi-octave frequencies. The paper by Horng *et al.* considers spiral inductors. Demonstrating the growing trend in wireless handset applications of implementing more functionality into low-cost module packaging formats, the paper by Zhang *et al.* illustrates a highly integrated power-amplifier module supporting tri-band frequency operation. Highlighting the need in wireless communications for very linear direct-conversion receivers, the paper by Sheng *et al.* focuses on applying nonlinearity cancellation methods to balanced mixer circuits.

These papers are a sample of those presented at the IEEE MTT-S RFIC Symposium and superbly highlight the many facets and interests of the RFIC community. I hope you find them interesting and valuable. Please join us next year in Fort Worth, TX, at the 2004 IEEE MTT-S RFIC Symposium for an exciting symposium filled with presentations, workshops, and tutorials highlighting the challenging issues and most recent advances occurring in the RFIC community.

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