CIRCUITS AND SYSTEMS FOR WIRELESS COMMUNICATIONS

Circuits and Systems for Wireless Communications

Edited by

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Preface

This book contains revised contributions by the speakers of the 1st IEEE Workshop on Wireless-Communication Circuits and Systems, held in Lucerne, Switzerland, from June 22–24, 1998. The aim of the workshop was to apply the vast expertise of the CAS Society in the area of circuit and system design to the rapidly growing field of wireless communications. The workshop combined presentations by invited experts from academia and industry with panel and informal discussions. The following topics were covered:

- RF System Integration (single-chip systems, CMOS RF circuits),
- RF Front-End Circuits (CMOS RF oscillators, broadband design techniques),
- Wideband Conversion for Software Radio (A/D conversion issues, wideband sub-sampling, low-spurious A/D conversion),
- Process Technologies for Future RF Systems (Si, SiGe, GaAs, CMOS, packaging technologies),
- DSP for Wireless Communications (DSP algorithms, fixed-point systems, DSP for baseband applications),
- Blind Channel Equalization (adaptive interference suppression, design techniques, channel estimation).

The workshop was a great success, with over 130 participants from 19 countries, from the U.S. to Europe and Asia, including a large contingent of participants from industry (60 %). Feedback from the participants showed that the carefully selected combination of tutorial-like lectures with lectures on specialized and advanced topics was a feature of the workshop that was particularly appreciated. Due to the relatively strong involvement of industry — both in the form of lecturers and listeners — a high level of discussion was attained in both panel sessions and informal gatherings.

By a stroke of luck, Philips Semiconductors, Zurich, Switzerland, celebrated their 50th anniversary in 1998. With the well-deserved spirit of celebration and generosity that this anniversary triggered at Philips, and the goodwill and encouragement of the Board of Governors and Excom members of the CAS Society, the finances were guaranteed at an early stage. For this the organizers were very grateful.

The format of this workshop and book has strongly been influenced by the AACD workshop series organized by J. H. Huijsing, R. J. van de Plassche and W. Sansen. The editors greatly appreciate the inspiration provided by this series.

It is a pleasure to acknowledge the speakers and authors for making available their expertise. Our sincerest thanks go also to D. Arnold, M. Goldenberg, D. **Lřm**, F. Lustenberger, H. Mathis, and H. P. Schmid for helping in the preparation of the workshop and book. Moreover, D. **Lřm**, H. Mathis and H. P. Schmid were strongly involved in the technical editing of this book, which the editors very gratefully acknowledge.

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