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ANALOGUE- DIGITAL ASICs

**circuit techniques,
design tools
and applications**

**Edited by
R. S. Soin,
F. Maloberti
and J. Franca**



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Dr R. Soin

ANALOGUE- DIGITAL ASICs

**circuit techniques,
design tools
and applications**



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Foreword

This volume arose from a one day course on mixed analogue–digital ASICs, held at ECCTD'89 (European Conference on Circuit Theory and Design) in Brighton, England. Following the success of the course in attracting a large number of attendees, the course organisers were invited to produce a multi-authored volume on the subject. The editors have extended the original request both in the quality and the number of contributions and contributors than were present at ECCTD'89. In view of the very strong interest in this area of electronics, a much updated version of the course, based on this book, is being offered at ECCTD'91 in Copenhagen, Denmark and at the the ASIC'91 conference in Rochester, New York. Although the need for mixed–signal electronics has been present for some time, there continue to be strong developments in technologies, design methods, design techniques and CAD tools to help produce more integrated solutions to this problem. The present book will serve as a useful foundation for practising engineers and postgraduate students working in this field.

David Haigh (Series Editor)
London, August, 1991.

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Finally we would like to thank our families for their patience, tolerance and support in the face of many days and hours of absence from domestic duties and responsibilities while preparing this volume.

In the final days of preparation of this book, one of the editors (RSS) was greatly saddened to learn of the passing away of his uncle, Dr. Om Prakash Madhok. We would like to mark the memory of his life and his work, tending the sick in three continents, over a working life extending to more than forty years.

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