



Sensor Technology HANDBOOK

Edited by
JON WILSON



Sensor Technology Handbook

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Sensor Technology Handbook

Editor-in-Chief
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Preface

The first decade of the 21st century has been labeled by some as the “Sensor Decade.” With a dramatic increase in sensor R&D and applications over the past 15 years, sensors are certainly poised on the brink of a revolution similar to that experienced in microcomputers in the 1980s. Just in automobiles alone, sensing needs are growing by leaps and bounds, and the sensing technologies used are as varied as the applications. Tremendous advances have been made in sensor technology and many more are on the horizon.

In this volume, we attempted to balance breadth and depth in a single, practical and up-to-date resource. Understanding sensor design and operation typically requires a cross-disciplinary background, as it draws from electrical engineering, mechanical engineering, physics, chemistry, biology, etc. This reference pulls together the most crucial information needed by those who design sensor systems and work with sensors of all types, written by experts from industry and academia. While it would be impossible to cover each and every sensor in use today, we attempted to provide as broad a range of sensor types and applications as possible. The latest technologies, from piezo materials to micro and nano sensors to wireless networks, are discussed, as well as the tried and true methodologies. In addition, information on design, interfacing and signal conditioning is given for each sensor type.

Organized primarily by sensor application, the book is cross-referenced with indices of sensor technology. Manufacturers are listed by sensor type. The other contributors and I have attempted to provide a useful handbook with technical explanations that are clear, simple and thorough. We will also attempt to keep it updated as the technology advances.

Jon S. Wilson
Chandler, Arizona
October, 2004

