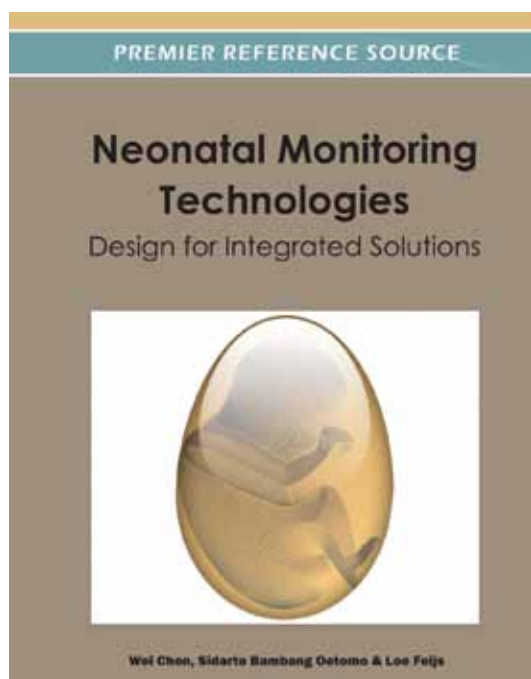


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Released: April 2012

## Neonatal Monitoring Technologies: Design for Integrated Solutions



ISBN: 9781466609754; © 2012; 536 pp.

Print: US \$245.00 | Perpetual: US \$370.00 | Print + Perpetual: US \$490.00

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Neonatal monitoring refers to the monitoring of vital physiological parameters of premature infants and full-term infants that are critically ill. In the last decades, several important treatment modalities emerged that had a substantial impact on the mortality of prematurely born infants. However, there is a concomitant increase of neurobehavioral problems on long-term follow-up.

**Neonatal Monitoring Technologies: Design for Integrated Solutions** presents a unique integration of knowledge from multidisciplinary fields of engineering, industrial design, and medical science for the healthcare of a specific user group. This comprehensive collection will support audiences ranging from clinical and medical professionals, academic researchers and students, technical professionals and managers, and policymakers of different sectors.

### Topics Covered:

- Biomedical sensors
- Body area network for health care
- Clinical signal extraction and analysis
- Information and communication technology for medical applications
- Neonatal intensive care
- Parent child bonding
- User centered design for neonatal monitoring
- Vital sign monitoring

**Market:** This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

**Wei Chen** received her B. Eng. degree in 1999 and M. Eng. degree in 2002 on telecommunication systems and smart sensor systems, from school of electrical engineering, Xi'an Jiaotong University, China. She obtained her Ph.D. degree in 2007 on performance monitoring and impairment mitigation for optical communication systems, from the department of electrical and electronics engineering, the University of Melbourne, Australia. She worked at Bell Laboratories Germany, Alcatel-Lucent, Stuttgart, Germany as an intern in 2005 and she was a research assistant in 2007 at the Department of Electrical & Electronics Engineering, University of Melbourne, Australia. Since July 2007, she has been an assistant professor in the Department of Industrial Design, Eindhoven University of Technology, the Netherlands, where she is also the chair of theme Comfort and Bonding in Health Care. She is a member of IEEE and a member of IEEE/LEOS GOLD Committee. Her research interests include neonatal monitoring, medical monitoring system design using wearable sensors, sensor system for ambient intelligence, wireless body sensor networks, performance optimization, smart sensor systems, signal processing, optical and wireless telecommunications.



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