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# Virtual Technologies for Business and Industrial Applications: Innovative and Synergistic Approaches

Virtual Technologies
for Business and
Industrial Applications
Innovative and Synergistic Approaches



N. RAGHAVENDRA RACI

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N. Raghavendra Rao (VIT University, India)

Business growth depends on the ability to innovate. Knowledge management concepts, business process reengineering, human centered assets and information and communication technologies are the foundation for innovation though virtual reality makes innovation a reality.

Virtual Technologies for Business and Industrial Applications: Innovative and Synergistic Approaches provides insight into uncovering the security risks of dynamically created content, and how proper content management can greatly improve overall security. This book also researches the security lifecycle, protocols and applications of the Internet, and the contemporary solutions to these problems.

#### **Topics Covered:**

- Neuroimaging technologies
- Modeling of dynamic surfaces
- · Virtual prototyping
- Agent-based virtual environments
- · Virtual reality communities

- · Augmented reality
- Collision detection
- · Machining operations simulation
- · Virtual reality in the healthcare sector
- Topographical capture techniques

**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.

N. Raghavendra Rao is a Professor at VIT University Chennai, India. Dr.Rao has a Masters degree in Commerce from Osmania University and a PhD in Finance from the University of Poona. He has also three post graduate diplomas in the areas of Financial Management, Portfolio Management and Tax Laws from the University of Madras. He has a rare distinction of having experience in the combined areas of Information Technology and Business applications. His rich experience in Industry is matched with a parallel academic experience in Management & IT in Business Schools. He has over two decades of experience in the development of application software related to manufacturing, service oriented organizations, financial institutions and business enterprises. He contributes chapters for books. He presents papers related to Information Technology and Knowledge Management at National and International conferences. He contributes articles on Information Technology to main stream news papers and journals. His area of research interest is Mobile Computing, Space Technology and Knowledge Management.



### Section 1: Business Models in Virtual Environment

#### Chapter 1

Innovation through Virtual Technologies
Rao N. Raghavendra (VIT University, India)

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Soft-Touch Haptics Modeling of Dynamic Surfaces

Sun Hanqiu (The Chinese University of Hong Kong, Hong Kong)

Chen Hui (Chinese Academy of Sciences and The Chinese University of Hong Kong, China)

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Collision Detection:

Zachmann Gabriel (Clausthal University, Germany)

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Brown Ross (Queensland University of Technology, Australia)
Rasmussen Rune (Queensland University of Technology, Australia)

#### Section 2: Virtual Technologies in Manufacturing Sector

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A Virtual Environment for Machining Operations Simulation and Machining Evaluation Nicolaos Bilalis (Technical University of Crete, Greece)

Markos Petousis (Technological Educational Institute of Crete, Greece)

#### Chapter 6

Augmented Reality for Collaborative Assembly Design in Manufacturing Sector Rui (Irene) Chen (The University of Sydney, Australia) Wang Xiangyu (The University of Sydney, Australia) Hou Lei (The University of Sydney, Australia)

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