# Table of Contents

**Preface** ................................................................................................................................................... xi

**Acknowledgment** ........................................................................................................................................ xii

**Chapter 1**
Madatrends in Engineering and Technology Education: A Call for the Communicative Imagination ... 1  
*Arun Patil, CQUniversity, Australia*  
*Henk Eijkman, University of New South Wales, Australia*

**Chapter 2**
21st Century Education Technologies for Engineers and IT Professionals ................................................. 9  
*Chan Chang Tik, INTI International University, Malaysia*

**Chapter 3**
Enculturation into Engineering Professional Practice: Using Legitimate Peripheral Participation to  
Develop Communication Skills in Engineering Students ................................................................................. 22  
*Richard K. Coll, University of Waikato, New Zealand*  
*Karsten E. Zegwaard, University of Waikato, New Zealand*

**Chapter 4**
Communication Framework to Empower 21st Century Engineers and IT Professionals ......................... 34  
*Ambigapathy Pandian, Universiti Sains Malaysia, Malaysia*  
*Shaik Abdul Malik Mohamed Ismail, Universiti Sains Malaysia, Malaysia*  
*Ahmad Sofwan Nathan Abdullah, Universiti Sains Malaysia, Malaysia*

**Chapter 5**
Linguistic and Cultural Skills for Communication in Global Workplaces of the 21st Century ............... 55  
*Carmela Briguglio, Curtin University, Australia*

**Chapter 6**
Conceptual Mapping, Visualisation, and Systems Thinking in Engineering ............................................. 72  
*Carol Russell, University of Western Sydney, Australia*
Chapter 7
Embedding Communication Skills in the Study of the Discipline ......................................................... 94
Katrina Falkner, University of Adelaide, Australia

Chapter 8
Engineering Students’ Self-Perceived Communication Competence and Technical Presentation Anxiety:A Case Study .................................................................................................................. 115
Noor Raha Mohd Radzuan, Universiti Malaysia Pahang, Malaysia
Sarjit Kaur, Universiti Sains Malaysia, Malaysia

Chapter 9
Educating the 21st Century’s Engineers and IT Professionals ................................................................. 132
Antonios Andreatos, Hellenic Air Force Academy, Greece

Chapter 10
Multiple Dimensions of Media Communication Skills: New Demands for Transnational, Trans-Cultural Knowledge Exchange ......................................................................................... 160
Michael Singh, University of Western Sydney, Australia
Guihua Cui, University of Western Sydney, Australia

Chapter 11
Visualization Skills in Engineering Education: Issues, Developments, and Enhancement .................. 175
Dayana Farzeeha Ali, Universiti Teknologi Malaysia, Malaysia
Arun Patil, CQuniversity, Australia
Mohd Safarin Nordin, Universiti Teknologi Malaysia, Malaysia

Chapter 12
Mitigation of Communication Challenges in the Indian Software Industry ......................................... 204
Anjanee Sethi, Management Development Institute, India
Shyamli Rathore, Sidman Learning Solutions, India

Compilation of References .......................................................................................................................... 223

About the Contributors .............................................................................................................................. 251

Index ......................................................................................................................................................... 256