Preface

This book summarizes research activity directed at assessing the value and impact of various types of assistive technologies for enhancing the abilities and overall quality of life for persons with severe/profound and multiple disabilities. The research areas reviewed in the various chapters of the book largely correspond to the main research activities of the authors. Thus, research is reviewed that covers the use of micro-switches for increasing independence and the use of speech-generating devices for improving communication interactions with others. We also review studies that have focused on the use of assistive technologies for promoting occupational outcomes and reducing problematic forms of behavior.

The aim of the book is to provide readers with an up-to-date picture of the scientific evidence available in the areas covered. The studies reviewed in each chapter were carefully selected to represent the best available evidence. Within each chapter, this evidence is summarized in terms of the technological devices used, the intervention programs applied to teach the use of those devices, the persons involved in the intervention programs, and the outcomes of the intervention programs. We also provide summative conclusions of the evidence and include a discussion of areas of future need and development. This book is intended to guide evidence-based practice in the field and offer direct support to the practitioner. Practitioners will learn how the technology can be employed, what types of interventions have been used with each type of technology, and the outcomes that can be expected.

The book also serves as an occasion to thank (a) the many participants involved in our studies, their families, and the staff personnel responsible for their daily programs; (b) the researchers and technical experts (engineers) who have made the studies possible; and (c) the organizations that have supported our research initiatives. With regard to the researchers, we would like to single out the extensive contribution of Doretta Oliva. With regard to the technical experts, we would like to acknowledge the continuous input of Domenico Bellini, Sandro Bracalente, and
Gianluigi Montironi. In terms of organizations, we want to emphasize the lasting positive role of the Lega F. D’Oro Research Center, Osimo, Italy; the Autism Treatment Centers of Dallas and San Antonio, Texas; and our respective institutions: University of Bari, Italy; Victoria University of Wellington, New Zealand; The University of Texas at Austin; and the American Health and Wellness Institute.