Foreword

Remanufacturing is often regarded as one of the most environmentally friendly and profitable end-of-life product recovery options for its prominent advantages against other recovery treatments such as repairing, refurbishing, or recycling. With the push towards sustainable development and the quest to build a circular economy, remanufacturing has been gaining attention in industry and academia during the past decade. In industry this trend is witnessed by a rapidly growing number of remanufacturing companies in both established and emerging countries such as US, UK, Germany, The Netherlands, Singapore, Japan, Australia, Brazil, China, India, and South Africa. Meanwhile, a large number of international-level publications dedicated to remanufacturing including journal papers, books, conference proceedings, and magazine articles indicate that academicians have started to address various issues encountered in remanufacturing due to their significance and urgency.

In this book, *Computational Intelligence in Remanufacturing*, Bo and Wen-Jing offer a new perspective in the field of remanufacturing research. One of the key features of this book is that it provides a holistic view of remanufacturing by dividing it into three stages, namely, retrieval, reproduction, and redistribution. Various problems that arise within these three independent as well as interdependent stages are addressed in this book. In addition, as the title implies, the book intensively uses various Computational Intelligence (CI) techniques such as genetic algorithm, ant colony optimization, multi-agent system, fuzzy logic, teaching-learning-based optimization, and firefly algorithm. In addition, the book provides a comprehensive literature review of remanufacturing. Furthermore, the organization of the book is such that each of the main chapters in the book concludes with unresolved issues and key recommendations that would, no doubt, lead to further development of the use of advanced and innovative applications of CI methodologies in remanufacturing research.

This book will be beneficial to students in mechanical, industrial, and electrical engineering, particularly those pursuing postgraduate studies in advanced manufacturing. Moreover, the issues addressed in this book can serve as foundations for researchers to build bodies of knowledge in the growing area of remanufacturing. Finally, practitioners can also use the models presented in this book to solve and analyse specific remanufacturing problems. Overall, this book makes an interesting read and is a welcome addition to the remanufacturing literature.

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