

Commendations

In this section, a number of collegial commendations are included from various scientific and industrial fields. These are drawn from different perspectives with a specific focus on parts of this book, such as design and decision science, mathematical modeling, socially responsible systems design, conflict management, design-based education, and industrial applications. Their substantive endorsements are given below.

Commendation (1)

Existing system design methodologies are one-sided because they ignore the dynamic interplay between preferences of the users (demand) and the physical performance of the engineering aspects (supply). Moreover, classical multi-objective optimisation methods contain fundamental modeling errors. Also, these classical multi-objective optimisation methods do not offer a best-fit design point but rather a set of design performance alternatives. This leaves designers without a unique solution to their problems. Finally, current multi-objective optimisation processes are rather disconnected from design and management practices because they lack deep involvement of decision makers in expressing their conflicting interests in one common preference domain.

To overcome these shortcomings, the author of this well-written book offers a new open design system methodology and a novel integrative optimisation method which is based on maximising the aggregated group preference. Their added value and use are demonstrated in real-life design applications, which show how to arrive at a true best fit for one common-purpose design. This groundbreaking work is based on the highly original and effective Preference Function Modeling (PFM) methodology introduced and studied by Barzilai.

Wolfert and his colleagues have converted PFM from an evaluation methodology into a design methodology, which I am certain will be of great interest and value to theoreticians and practitioners alike.

Simeon Reich (Doctor of Sciences)
Professor of Mathematics

Commendation (2)

“It is a real essential advance that Wolfert integrates within the Odesys methodology, the ontological U-model we developed with my colleague Lemson of the Netherlands Institute for Organizational Development (NPI) with the epistemological and now widespread U-theory of Scharmer from MIT, into a holistic model of great practical value for strategic management, organizational development, design-based learning and conflict management. Particularly in my work as a mediator in dramatically escalated multi-party political conflicts, de-escalation was found to be easier by first finding a consensus on what the conflicting parties perceive as a horrible and undesirable future to be prevented, before they could agree on positive perspectives of a desired future and constructive ways to achieve it.

Odesys has the potential to truly connect stakeholders and bridge the gap between their conflicting interests using transparent and participatory methods and models to first de-escalate their complex problems and then provide shared solutions.”

Friedrich Glasl (Doctor of Sciences & honorary Doctor)
Professor of Conflict management & Organization development, founder of Trigon

Commendation (3)

“An important challenge of systems design, whether it concerns roads, airplanes or government policies, is that it has to respond to engineering needs and wants of many different stakeholders. More than ever, next to research, engineering and management oriented institutes of higher education need to foster design capabilities. With a cutting-edge approach, embedded in a harmonious framing of pragmatic design activity and scientific inquiry, this book provides a rigorous solution for multi-stakeholder design problems. Wolfert further contributes with a constructivist, experiential design learning approach that recognizes stakeholder preferences and helps students to address socio-technical complexity in systems design.

I strongly recommend this volume to educators of design, engineering and management, to researchers interested in preference-based optimisation, and to practitioners who are wondering how to create socially responsible systems.”

Lori Tavasszy (Doctor of technical Sciences)
Professor of Logistics systems & Freight transportation

Commendation (4)

“The topic of integrating human preferences into system design optimisation is important. Over the years, many methodologies were proposed and used to tackle this issue. Nearly all of them suffered from some serious flaws caused by using inadequate ways to quantify and measure human preferences. Wolfert and his colleagues offer a novel and promising methodology to address the system design challenge through the Preference Function Modeling (PFM) that was developed by Barzilai over the last three decades. PFM was proven to overcome major flaws in previously used methods and as such it can become a highly useful and effective tool for future system designers seeking to take true account of the preferences of various stakeholders involved in the design.”

Boaz Golany (Doctor of Sciences)
Professor of Data & Decision sciences

Commendation (5)

“Our contemporary engineering challenges must increasingly meet multiple objectives which even become more complex. Not only technical feasibility or safety is required, but also economic feasibility, contractual compliance, social responsibility, environmental management and other requirements must be met simultaneously. Odesys has so far proved to be ideally suited for finding these best-fit solutions. Wolfert and his colleagues bring a new perspective within this field of design optimisation and operational excellence. Their new Preference Function Modeling (PFM) based design methodology Odesys, operationalised in the design and decision support tool the Preferendus, has been applied to several industry use cases. The Preferendus was capable of outperforming existing design/decision management approaches to searching for the most optimal synthesis for multiple stakeholder, ranging from planners, engineers, production managers and/or vessel captains. The developments the author describes in this book are of great significance in bringing the Odesys methodology to industrial value within a broad engineering management context.”

Sander Steenbrink (Doctor of technical Sciences)
Director Corporate Research & Development at Boskalis