

Preface

Our daily life, economic vitality, and national security depend on a stable, safe, and resilient cyberspace. We rely on this vast array of networks to communicate and travel, power our homes, run our economy, and provide government services. Yet, cyberintrusions and attacks have increased dramatically over the last decade, exposing sensitive personal and business information, disrupting critical operations, and imposing high costs on the economy. The human factor at the core of cybersecurity provides greater insight into this issue and highlights human error and awareness as key factors, in addition to technical lapses, as the areas of greatest concern. This book focuses on the social, economic, and behavioral aspects of cyberspace, which are largely missing from the general discourse on cybersecurity. The human element at the core of cybersecurity is what makes cyberspace the complex, adaptive system that it is. An inclusive, multidisciplinary, holistic approach that combines the technical and behavioral element is needed to enhance cybersecurity. Human factors also pervade the top cyberthreats. Personnel management and cyberawareness are essential for achieving holistic cybersecurity.

This book will be of special value to a large variety of professionals, researchers, and students focusing on the human aspect of cyberspace, and for the effective evaluation of security measures, interfaces, user-centered design, and design for special populations, particularly the elderly. We hope this book is informative, but even more that it is thought provoking. We hope it inspires, leading the reader to contemplate other questions, applications, and potential solutions in creating safe and secure designs for all.

A total of six sections presented in this book:

- I. Cybersecurity Tools and Analytics
- II. Cybersecurity Interface and Metrics
- III. Human Factors in Cyber-Warfare
- IV. Human Dimension and Visualization for Cybersecurity
- V. Cybersecurity Training and Education
- VI. Privacy and Cultural Factors in Cybersecurity

Each section contains research paper that has been reviewed by members of the International Editorial Board. Our sincere thanks and appreciation to the board members as listed below:

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