Human Factors in Software Development and Design

Part of the Advances in Systems Analysis, Software Engineering, and High Performance Computing Book Series

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Computer programs and processes that take into account the goals and needs of the user meet with the greatest success, so it behooves software engineers to consider the human element inherent in every line of code they write.

**Human Factors in Software Development and Design** brings together high quality research on the influence and impact of ordinary people on the software industry. With the goal of improving the quality and usability of computer technologies, this premier reference is intended for students and practitioners of software engineering as well as researchers, educators, and interested laymen.

**Topics Covered:**
- Computer Science Education
- Global Software Development
- ICT Project Design
- Multi-Agent Systems
- Public Administration Platforms
- Situational Awareness
- Socio-Economic Factors
- User-Centered Design

*Saqib Saeed* is an assistant professor at the Computer Science department at Bahria University, Islamabad, Pakistan. He has a PhD in Information Systems from the University of Siegen, Germany, and a Master's degree in Software Technology from Stuttgart University of Applied Sciences, Germany. Dr. Saeed is also a certified software quality engineer from the American Society for Quality. He is a member of advisory boards of several international journals besides being guest editor of several special issues. Dr. Saeed's research interests lie in the areas of human-centered computing, computer supported cooperative work, empirical software engineering, and ICT4D, and he has more than 50 publications to his credit.
Section 1: Introduction

Chapter 1
Open Innovation:
Noel Carroll (University of Limerick, Ireland)

Chapter 2
Innovations in Information and Communication Technology Platforms for Public Administration:
Shefali Virkar (University of Oxford, UK)

Chapter 3
Software Engineering and New Emerging Technologies:
Sergio Ricardo Mazini (University Center Toledo Aracatuba (UNITOLEDO), Brazil)

Chapter 4
The Games People Play:
Shefali Virkar (University of Oxford, UK)

Chapter 5
Investigating the Success of OSS Software Projects:
Amir Hossein Ghapanchi (Griffith University, Australia)

Section 2: User-Centered Design

Chapter 6
Creating Effective Communication among User-Centered Technology Design Groups:
Laura B. Dahl (University of Utah, USA)

Chapter 7
Managing Differences in Situational Awareness Due to Roles in the Design-Use Process of Complex Systems:
Jens Alfredson (Saab Aeronautics, Sweden)

Chapter 8
Improving Novices Programmers’ Skills through Playability and Pattern Discovery:
Thiago Schumacher Barcelos (Instituto Federal de Educação, Ciência e Tecnologia de São Paulo, Brazil & Universidade Cruzeiro do Sul, Brazil),
Roberto Muñoz Soto (Universidad de Valparaíso – Escuela de Ingeniería Civil Informática, Chile),
Ismar Franco Silveira (Universidade Cruzeiro do Sul, Brazil & Universidade Presbiteriana Mackenzie, Brazil)

Chapter 9
Wiki for Agility:
Pankaj Kamthan (Concordia University, Canada)

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A Semantic Approach for Multi-Agent System Design:
Rosario Gerardi (Federal University of Maranhão, Brazil),
Adriana Leite (Federal University of Maranhão, Brazil)

Chapter 11
Model to Estimate the Human Factor Quality in FLOSS Development:
Zulaima Chiapin (Simón Bolívar University, Venezuela),
Kenier Dominguez (Simón Bolívar University, Venezuela),
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Edunilis Méndez (Simón Bolívar University, Venezuela)

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From Knowledge Management to Knowledge Governance:
Tariq Zaman (Universiti Malaysia Sarawak, Malaysia),
Alvin W. Yeo (Universiti Malaysia Sarawak, Malaysia),
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Anabela G. Silva (University of Aveiro, Portugal),
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