Preface

Human Work Interaction Design (HWID) was established in September 2005 as the sixth working group (WG 13.6) of the IFIP Technical Committee 13 on Human–Computer Interaction (HCI). The scope of this group is the analysis and interaction design of a variety of complex work and life contexts found in different business and application domains. For this purpose, it is important to establish relationships between extensive empirical work domain studies and HCI design. WG 13.6 aims to provide the basis for an improved cross-disciplinary cooperation and mutual inspiration among researchers from the many disciplines that by nature are involved in deep analysis of a work domain. Complexity is hence a key notion in the activities of this working group, but it is not a priori defined or limited to any particular domains. WG 13.6 initiates and fosters new research initiatives and developments, as well as an increased awareness of HWID in the HCI curriculum.

This volume presents chapters developed from papers presented at the 4th HWID working conference held at the University of West London during June 25–26, 2015. The theme of this conference was on the integration of work analysis and interaction design methods for pervasive and smart workplaces.

Pervasive and smart technologies have pushed workplace configuration beyond linear logic and physical boundaries. As a result, workers' experience of and access to technology is increasingly pervasive, and their agency is constantly reconfigured. While in certain areas of work this is not new (e.g., technology mediation and decision support in air traffic control), more recent developments in other domains such as health care (e.g., augmented reality in computer-aided surgery) have raised challenging issues for HCI researchers and practitioners. The question now is how to improve the quality of workers' experience and outputs?

The chapters in this book focus on answering this question to support professionals, academia, national laboratories, and industry engaged in human work analysis and interaction design for the workplace. The first section provides an overview as well as instances of what could be classed as HWID methodologies. The second section offers different experiences on conceptualizing and researching the work environment in terms of how to sense and integrate its different dimensions into interaction design. The last section of the book presents chapters providing examples of HWID application in pervasive and smart workplaces across various domains such as aviation, education, product design, and archeology.

We hope this book becomes a resource for the type of discussion around HWID topics that took place at the working conference in London.

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