Human Computer Interaction An Empirical Research Perspective

This comprehensive volume is the product of an intensive collaborative effort among researchers across the United States, Europe and Japan. The result -- a change in the way we think of humans and computers.

Winner of a 2013 CHOICE Outstanding Academic Title Award The third edition of a groundbreaking reference, The Human-Computer Interaction Handbook: Fundamentals, Evolving Technologies, and Emerging Applications raises the bar for handbooks in this field. It is the largest, most complete compilation of HCI theories, principles, advances, case st

The four-volume set LNCS 9296–9299 constitutes the refereed proceedings of the 15th IFIP TC13 International Conference on Human-Computer Interaction, INTERACT 2015, held in Bamberg, Germany, in September 2015. The 47 papers included in the second volume are organized in topical sections on computer-supported cooperative work and social computing; end-user development; evaluation methods / usability evaluation; eye tracking; gesture interaction; HCI and security; HCI for developing regions and social development; HCI for education.

Emotions and Affect in Human Factors and Human-Computer Interaction is a complete guide for conducting affect-related research and design projects in H/F and HCI domains. Introducing necessary concepts, methods, approaches, and applications, the book highlights how critical emotions and affect are to everyday life and interaction with cognitive artifacts. The text covers the basis of neural mechanisms of affective phenomena, as well as representative approaches to Affective Computing, Kansei Engineering, Hedonomics, and Emotional Design. The methodologies section includes affect induction techniques, measurement techniques, detection and recognition techniques, and regulation models and strategies. The application chapters discuss various H/F and HCI domains: product design, human-robot interaction, behavioral health and game design, and transportation. Engineers and designers can learn and apply psychological theories and mechanisms to account for their affect-related research and can develop their own domain-specific theory. The approach outlined in this handbook works to close the existing gap between the traditional affect research and the emerging field of affective design and affective computing. Provides a theoretical background of affective sciences Demonstrates diverse affect induction methods in actual research settings Describes sensing technologies, such as brain-computer interfaces, facial expression detection, and more Covers emotion modeling and its application to regulation processes Includes case studies and applied examples in a variety of H/F and HCI application areas Addresses emerging interdisciplinary areas including Positive Technology, Subliminal Perception, Physiological Computing, and Aesthetic Computing

Human-Computer Interaction

Human-Computer Interaction – INTERACT 2015

Essential Cybersecurity Science

A Practical Guide with Visual Examples

A Journal of Theoretical, Empirical, and Methodological Issues of User Science and of System Design

Cyberpsychology

Emotions and Affect in Human Factors and Human-Computer Interaction

International Student Education in Tertiary Settings addresses key issues in international student education programme design and implementation. It maps contemporary theories and practices in international students ' transcultural learning and engagement and showcases successful tertiary education programmes for international students in Australia, China, Japan, the USA and the UK. The book highlights the opportunities for engaging international students that are built into the various programmes, international students ' strategies for coping with various challenges of engagement with their educational programmes, and a range of factors that confound their engagement in academic and intercultural learning. The broad coverage of international education programmes in a variety of geographical, sociocultural and pedagogical settings enables the discussion about the complexity of contemporary international student education, shared challenges and productive ways of engaging international students in transcultural learning and the prospect of sustainable engagement. The principles and insights into programme design and implementation to engage international students will be useful for researchers and practitioners in international student education, academics tasked with teaching international students in their class, and administrators responsible for managing and providing services to international students.

Human-Computer Interaction draws on the fields of computer science, psychology, cognitive science, and organisational and social sciences in order to understand how people use and experience interactive technology. Until now, researchers have been forced to return to the individual subjects to learn about research methods and how to adapt them to the particular challenges of HCI. This book provides a single resource through which a range of commonly used research methods in HCI are introduced. Chapters are authored by internationally leading HCI researchers who use examples from their own work to illustrate how the methods apply in an HCI context. Each chapter also contains key references to help researchers find out more about each method as it has been used in HCI. Topics covered include experimental design, use of eyetracking, qualitative research methods, cognitive modelling, how to develop new methodologies and writing up your research.

Museums have been a domain of study and design intervention for Human-Computer Interaction (HCI) for several decades. However, while resources providing overviews on the key issues in the scholarship have been produced in the fields of museum and visitor studies, no such resource as yet existed within HCI. This book fills this gap and covers key issues regarding the study and design of HCIs in museums. Through an on-site focus, the book examines how digital interactive technologies impact and shape galleries, exhibitions, and their visitors. It consolidates the body of work in HCI conducted in the heritage field and integrates it with insights from related fields and from digital heritage practice. Processes of HCI design and evaluation approaches for museums are also discussed. This book draws from the authors' extensive knowledge of case studies as well as from their own work to provide examples, reflections, and illustrations of relevant concepts and problems. This book is designed for students and early career researchers in HCI or Interaction Design, for more seasoned investigators who might approach the museum domain for the first time, and for researchers and practitioners in related fields such as heritage and museum studies or visitor studies. Designers who might wish to understand the HCI perspective on visitor-facing interactive technologies may also find this book useful.

Esta enciclopedia presenta numerosas experiencias y discernimientos de profesionales de todo el mundo sobre discusiones y perspectivas de la la interacción hombre-computadoras

Human-computer Interaction

Special Issue, Empirical Studies of Object-oriented Design

Gender-Inclusive HCI Research and Design

Toward a Multidisciplinary Science

The Psychology of Human-Computer Interaction

Research Methods for Human-Computer Interaction

Issues of Human Computer Interaction

The second edition of Human-Computer Interaction established itself as one of the classic textbooks in the area, with its broad coverage and rigorous approach, this new edition builds on the existing strengths of the book, but giving the text a more student-friendly slant and improving the coverage in certain areas. The revised structure, separating out the introductory and more advanced material will make it easier to use the book on a variety of courses. This new edition now includes chapters on Interaction Design, Universal Access and Rich Interaction, as well as covering the latest developments in ubiquitous computing and Web technologies, making it the ideal text to provide a grounding in HCI theory and practice.

HCI Models, Theories, and Frameworks provides a thorough pedagological survey of the science of Human-Computer Interaction (HCI). HCI spans many disciplines and professions, including anthropology, cognitive psychology, computer graphics, graphical design, human factors engineering, interaction design, sociology, and software engineering. While many books and courses now address HCI technology and application areas, none has addressed HCI's multidisciplinary foundations with much scope or depth. This text fills a huge void in the university education and training of HCI students as well as in the lifelong learning and professional development of HCI practitioners. Contributors are leading researchers in the field of HCI. If you teach a second course in HCI, you should consider this book. This book provides a comprehensive understanding of the HCI concepts and methods in use today, presenting enough comparative detail to make primary sources more accessible. Chapters are formatted to facilitate comparisons among the various HCI models. Each chapter focuses on a different level of scientific analysis or approach, but all in an identical format, facilitating comparison and contrast of the various HCI models. Each approach is described in terms of its roots, motivation, and type of HCI problems it typically addresses. The approach is then compared with its nearest neighbors, illustrated in a paradigmatic application, and analyzed in terms of its future. This book is essential reading for professionals, educators, and students in HCI who want to gain a better understanding of the theoretical bases of HCI, and who will make use of a good background, refresher, reference to the field and/or index to the literature. Contributors are leading researchers in the field of Human-Computer Interaction Fills a major gap in current literature about the rich scientific foundations of HCI Provides a thorough pedogological survey of the science of HCI

This 1989 book is a distinctive work in the field of human-computer interaction (HCI). Cognitive ergonomics and HCI encompass a wide range of research and development activities in both academic and industrial environments, and this book satisfies a clear need for the dissemination of the knowledge generated by work in progress or completed.

Nowadays, mental models are seen as crucial in systems design. Research is driven by the assumption that a better insight into a user's cognitive processes when using a system will improve design methods and provide friendly and efficient interfaces. The papers in this volume explore three fundamental issues: understanding the complexity of the intended worksystem, describing it by models and finally building the required powerful and usable system. The papers are an edited selection of those presented at the 8th interdisciplinary workshop on Mental Models and HCI, held in Austria in June 1989. They concentrate primarily on design issues, their theoretical background and the application of the concept of Human-Computer Interaction (HCI). Nevertheless, there are also contributions on theoretical topics and methodological questions.

Understanding the Role of the Spectator in Human-Computer Interaction

Computational Interaction

Human-computer Interaction, INTERACT '03

Cognitive Science and Its Applications for Human-computer Interaction

Cognitive Ergonomics and Human-Computer Interaction

User Centered System Design

HCI Models, Theories, and Frameworks

This textbook provides a comprehensive overview of the human-computer interface in clear, non-technical language, making it an ideal introduction for students of both psychology and computer science. Covering the past, present, and future developments in technology and psychology, it combines cutting-edge academic research with engaging illustrations and examples that show students how the material relates to their lives. Topics addressed include: human factors of input devices, and the basics of sensation and perception; memory and cognitive issues of users navigating their way through interfaces; communication via programming languages and natural speech interaction; cyberpathologies such as techno-stress and Internet addiction disorders; and challenges surrounding automation and artificial intelligence. This thoroughly updated second edition features new chapters on virtual reality and cybersecurity; expanded coverage of social media, mobile computing, e-learning, and video games; and end-of-chapter review questions that ensure students have mastered key objectives.

This conceptual review provides an overview of the motivations that have driven research in gender and inclusive HCI design.

Human Computer Interaction (HCI) has its roots in the main areas of industrial engineering, human factors and cognitive psychology with the focus on the development of user-friendly IT. Traditionally, the research in this area has emphasised the technological aspect of this relationship (the Computer). More recently, other aspects concerning the organizational, social and human context also began to be considered (the Human). Today, one can say that any attempt to facilitate the relationship between the machine and the user must consider not only the technological perspective (e.g., promote the usability) but also, for instance, the way the user is going to use the technology and his or her purpose as well as the social and cultural context of this use (the Human and the Computer).

This work brings together a collection of 13 contributions that apply activity theory - a psychological theory with a naturalistic emphasis - to problems of human-computer interaction. It presents activity theory as a means of structuring and guiding field studies of human-computer interaction.

New Perspectives on Human-Computer Interaction

Human-Computer Interactions in Museums

Designing Interaction

Third International Conference, EWHCI '93, Moscow, Russia, August 3-7, 1993. Selected Papers

Interaction Design

15th IFIP TC 13 International Conference, Bamberg, Germany, September 14-18, 2015, Proceedings, Part II

Interrogating Programs and Processes in Diverse Contexts

This book presents computational interaction as an approach to explaining and enhancing the interaction between humans and information technology. Computational interaction applies abstraction, automation, and analysis to inform our understanding of the structure of interaction and also to inform the design of the software that drives new and exciting human-computer interfaces. The methods of computational interaction allow, for example, designers to identify user interfaces that are optimal against some objective criteria. They also allow software engineers to build interactive systems that adapt their behaviour to better suit individual capacities and preferences.00This book introduces computational interaction design to the reader by exploring a wide range of computational interaction techniques, strategies and methods. It explains how techniques such as optimisation, economic modelling, machine learning, control theory, formal methods, cognitive models and statistical language processing can be used to model interaction and design more expressive, efficient and versatile interaction.

This is the first comprehensive history of human-computer interaction (HCI). Whether you are a user-experience professional or an academic researcher, whether you identify with computer science,human factors, information systems, information science, design, or communication, you can discover how your experiences fit into the expanding field of HCI. You can determine where to look for relevant information in other fields—and where you won't find it. This book describes the different fields that have participated in improving our digital tools.It is organized chronologically, describing major developments across fields in each period. Computer use has changed radically, but many underlying forces are constant. Technology has changed rapidly, human nature very little. An irresistible force meets an immovable object. The exponential rate of technological change gives us little time to react before technology moves on. Patterns and trajectories described in this book provide your best chance to anticipate what could come next. We have reached a turning point. Tools that we built for ourselves to use are increasingly influencing how we use them, in ways that are planned and sometimes unplanned. The book ends with issues worthy of consideration as we explore the new world that we and our digital partners are shaping.

Interaction with computers is becoming an increasingly ubiquitous and public affair. With more and more interactive digital systems being deployed in places such as museums, city streets and performance venues, understanding how to design for them is becoming ever more pertinent. Crafting interactions for these public settings raises a host of new challenges for human-computer interaction, widening the focus of design from concern about an individual's dialogue with an interface to also consider the ways in which interaction affects and is affected by spectators and bystanders. Designing Interfaces in Public Settings takes a performative perspective on interaction, exploring a series of empirical studies of technology at work in public performance environments. From interactive storytelling to mobile devices on city streets, from digital telemetry systems on fairground rides to augmented reality installation interactive, the book documents the design issues emerging from the changing role of technology as it pushes out into our everyday lives. Building a design framework from these studies and the growing body of literature examining public technologies, this book provides a new perspective for understanding human-computer interaction. Mapping out this new and challenging design space, Designing Interfaces in Public Settings offers both conceptual understandings and practical strategies for interaction design practitioners, artists working with technology, and computer scientists.

The five-volume set LNCS 12932-12936 constitutes the proceedings of the 18th IFIP TC 13 International Conference on Human-Computer Interaction, INTERACT 2021, held in Bari, Italy, in August/September 2021. The total of 105 full papers presented together with 72 short papers and 70 other papers in these books was carefully reviewed and selected from 680 submissions. The contributions are organized in topical sections named: Part I: affective computing; assistive technology for cognition and neurodevelopment disorders; assistive technology for mobility and rehabilitation; assistive technology for visually impaired; augmented reality; computer supported cooperative work. Part II: COVID-19 & HCI; croudsourcing methods in HCI; design for automotive interfaces; design methods; designing for smart devices & IoT; designing for the elderly and accessibility; education and HCI; experiencing sound and music technologies; explainable AI. Part III: games and gamification; gesture interaction; human-centered development of sustainable technology; human-robot interaction; information visualization; interactive design and cultural development. Part IV: interaction techniques; interaction with conversational agents; interaction with mobile devices; methods for user studies; personalization and recommender systems; social networks and social media; tangible interaction; usable security. Part V: user studies; virtual reality; courses; industrial experiences; interactive demos; panels; posters; workshops. The chapter 'Stress Out: Translating Real-World Stressors into Audio-Visual Stress Cues in VR for Police Training' is open access under a CC BY 4.0 license at link.springer.com. The chapter 'WhatsApp in Politics?! Collaborative Tools Shifting Boundaries' is open access under a CC BY 4.0 license at link.springer.com.

Fundamentals, Evolving Technologies, and Emerging Applications, Third Edition

IFIP TC13 International Conference on Human-Computer Interaction, 1st-5th September 2003, Zurich, Switzerland

Being Human

A Conceptual Review

International Student Education in Tertiary Settings

Designing Interfaces in Public Settings

Multimodal Human-computer Interaction

Human-Computer Interaction: An Empirical Research Perspective is the definitive guide to empirical research in HCI. The book begins with foundational topics including historical context, the human factor, interaction elements, and the fundamentals of science and research. From there, you'll progress to learning about the methods for conducting an experiment to evaluate a new computer interface or interaction technique. There are detailed discussions and how-to analyses on models of interaction, focusing on descriptive models and predictive models. Writing and publishing a research paper is explored with helpful tips for success. Throughout the book, you'll find hands-on exercises, checklists, and real-world examples. This is your must-have, comprehensive guide to empirical and experimental research in HCI—an essential addition to your HCI library. Master empirical and experimental research with this comprehensive, A-to-Z guide in a concise, hands-on reference

Discover the practical and theoretical ins-and-outs of user studies Find exercises, takeaway points, and case studies throughout

Takes the human-computer interaction researcher through the complete experimental process, from identifying a research question, to conducting an experiment and analysing the results.

Human-computer interaction (HCI) is an urgent and rapidly developing area of computer science research and application. As it continues to evolve and to define itself, it is possible to identify distinct paradigms, or orientations to HCI research and application. Initially, HCI work focussed on empirical laboratory evaluation of computer systems and techniques. Subsequently, empirical studies of usability were organized by and addressed to cognitive theoretical description of user behavior and experience. Currently, the focus of HCI work is shifting toward a more directive role in invention, design and development of systems and techniques. The progression of these three paradigms comprises a case study of a field discovering what it is about, and more generally, of the variety of roles available in the psychology of technology. Keywords: Man machine systems. (kt).

This report is for anyone interested in the ramifications of our digital future and in ways society must adjust to the technological changes to come. It is also for those of us who work in the field of Human-Computer Interaction and who are concerned that our research agenda stays relevant in the years to come. Produced from a forum entitled HCI 2020: Human Values in a Digital Age, held in Sanlucar la Mayor, Spain on March 15-16, 2007. Convened by Richard Harper and Abigail Sellen of Microsoft Research Cambridge, Tom Rodden of the United Kingdom's Nottingham University, and Yvonne Rogers of the Open University.

An Introduction to Human-Computer Interaction

Foundations

The Evolution of Human-Computer Interaction

Human-Computer Interaction

15th IFIP TC 13 International Conference, Bamberg, Germany, September 14-18, 2015, Proceedings, Part IV

Encyclopedia of Human Computer Interaction

Context and Consciousness

"Human-Computer Interaction and Management Information Systems: Foundations" offers state-of-the-art research by a distinguished set of authors who span the MIS and HCI fields. The original chapters provide authoritative commentaries and in-depth descriptions of research programs that will guide 21st century scholars, graduate students, and industry professionals. Human-Computer Interaction (or Human Factors) in MIS is concerned with the ways humans interact with information, technologies, and tasks, especially in business, managerial, organizational, and cultural contexts. It is distinctive in many ways when compared with HCI studies in other disciplines. The MIS perspective affords special importance to managerial and organizational contexts by focusing on analysis of tasks and outcomes at a level that considers organizational effectiveness. With the recent advancement of technologies and development of many sophisticated applications, human-centeredness in MIS has become more critical than ever before. This book focuses on the basics of HCI, with emphasis on concepts, issues, theories, and models that are related to understanding human tasks, and the interactions among humans, tasks, information, and technologies in organizational contexts in general.

First published in 1988. Routledge is an imprint of Taylor & Francis, an informa company.

Abstract: "Multimodal interaction is a way to make user interfaces natural and efficient with parallel and synergistic use of two or more input or output modalities. Two-handed interaction is a special case of multimodal interaction that makes use of both hands in a combined and coordinated manner. This dissertation gives a comprehensive survey on issues that are related to multimodal and two-handed interaction. Earlier work in human-computer interaction and related psychology is introduced within both these fields. The constructive part of this dissertation consists of designing and building a group of multimodal interaction techniques that were implemented in two research prototypes. The first prototype is an object-oriented drawing program that implements new tools that are controlled with two-handed input. The second prototype is a multimodal information kiosk that responds to both touch and speech input, and makes use of touch pressure sensing. In order to evaluate the success of constructive research, four empirical studies were conducted to compare the new interaction techniques to the conventional methods and to evaluate how the users react on them. The first of the studies compared a new direct manipulation tool to conventional menu and palette commands. The second evaluation was more informal and determined how an alternative way of drawing would be used by normal users. The third study was aimed at determining what is the best input device configuration to control the new tools. The last study evaluated different touch-based selection techniques in a multimodal touch and speech based information kiosk. The need for extensive interdisciplinary research is pointed out with a group of research questions that need to be answered to better understand multimodal human-computer interaction. The current knowledge only applies to a few special cases, and there is no unified modality theory of multimodal interaction that covers both input and output modalities."

Defines the psychology of human-computer interaction, showing how to span the gap between science & application. Studies the behavior of users in interacting with computer systems.

Paradigms for Human-computer Interaction

18th IFIP TC 13 International Conference, Bari, Italy, August 30 – September 3, 2021, Proceedings, Part IV

Research Methods in Human-Computer Interaction

Psychology at the Human-Computer Interface

Human Computer Interaction Handbook

An Empirical Research Perspective

A Constructive and Empirical Study

If you're involved in cybersecurity as a software developer, forensic investigator, or network administrator, this practical guide shows you how to apply the scientific method when assessing techniques for protecting your information systems. You'll learn how to conduct scientific experiments on everyday tools and procedures, whether you're evaluating corporate security systems, testing your own security product, or looking for bugs in a mobile game. Once author Josiah Dykstra gets you up to speed on the scientific method, he helps you focus on standalone, domain-specific topics, such as cryptography, malware analysis, and system security engineering. The latter chapters include practical case studies that demonstrate how to use available tools to conduct domain-specific scientific experiments. Learn the steps necessary to conduct scientific experiments in cybersecurity Explore fuzzing to test how your software handles various inputs Measure the performance of the Snort intrusion detection system Locate malicious "needles in a haystack" in your network and IT environment Evaluate cryptography design and application in IoT products Conduct an experiment to identify relationships between similar malware binaries Understand system-level security requirements for enterprise networks and web services

The International Conference on Human-Computer Interaction EWHCI '93 was thethird conference in a series which started in 1991 in Moscow. Like its predecessors, it was occasioned by the long separation of workers in HCI from one another and the new opportunity to learn from one another and to start cooperations with each other. The conference was international,with papers and participants from 16 countries. This volume contains a selection of the best papers presented at the conference. The papers are grouped into parts on: foundations of HCI; techniques, tools and paradigms for interface design; information visualization; empiricalstudies; multimedia; hypertext; customizing interfaces; teaching and learning; applications.

Fundamentals of Human-Computer Interaction aims to sensitize the systems designer to the problems faced by the user of an interactive system. The book grew out of a course entitled ""The User Interface: Human Factors for Computer-based Systems"" which has been run annually at the University of York since 1981. This course has been attended primarily by systems managers from the computer industry. The book is organized into three parts. Part One focuses on the user as processor of information with studies on visual perception; extracting information from printed and electronically presented text; and human memory. Part Two on the use of behavioral data includes studies on how and when to collect behavioral data; and statistical evaluation of behavioral data. Part Three deals with user interfaces. The chapters in this section cover topics such as work station design, user interface design, and speech communication. It is hoped that this book will be read by systems engineers and managers concerned with the design of interactive systems as well as graduate and undergraduate computer science students. The book is also suitable as a tutorial text for certain courses for students of Psychology and Ergonomics.

Formal methods have already been shown to improve the development process and quality assurance in system design and implementation. This volume examines whether these benefits also apply to the field of human-computer interface design and implementation, and whether formal methods can offer useful support in usability evaluation and obtaining more reliable implementations of user requirements. Its main aim is to compare the different approaches and examine which particular type of implementation and problem each one is best suited to. To enable the reader to compare and contrast the approaches as easily as possible, each one is applied to the same case study: the specification of an ideal Netscape-like web browser and html page server. The resulting volume will provide invaluable reading for final year undergraduate and postgraduate courses on user interfaces, user interface design, and applications of formal methods.

Human-computer Interaction in the Year 2020

Experimental Human-Computer Interaction

Human-computer Interaction and Management Information Systems: Foundations

Fundamentals of Human-Computer Interaction

From Tool to Partner

Mental Models and Human-Computer Interaction

Build, Test, and Evaluate Secure Systems

Designing Interaction, first published in 1991, presents a broadbased and fundamental re-examination of human-computer interaction as a practical and scientific endeavor. The chapters in this well-integrated, tightly focused book are by psychologists and computer scientists in industry and academia, who examine the relationship between contemporary psychology and human-computer interaction. HCI seeks to produce user interfaces that faciliitate and enrich human motivation, action and experience; but to do so deliberately it must also incorporate means of understanding user interfaces in human terms - the province of psychology. Conversely, the design and use of computing equipment provides psychologists with a diverse and challenging empirical field in which to assess their theories and methodologies.

This work brings together papers written by researchers and practitioners actively working in the field of human-computer interaction. It should be of use to students who study information technology and computer sciences, and to professional designers who are interested in User Interface design.

The four-volume set LNCS 9296-9299 constitutes the refereed proceedings of the 15th IFIP TC13 International Conference on Human-Computer Interaction, INTERACT 2015, held in Bamberg, Germany, in September 2015. The 74 full and short papers and 4 organizational overviews, 2 panels, 6 tutorials, and 11 workshops included in the fourth volume are organized in topical sections on tangible and tactile interaction; tools for design; touch and haptic; user and task modelling; visualization; visualization 3D; visualization in virtual spaces; wearable computing; demonstrations; and interactive posters.

Research Methods in Human-Computer Interaction is a comprehensive guide to performing research and is essential reading for both quantitative and qualitative methods. Since the first edition was published in 2009, the book has been adopted for use at leading universities around the world, including Harvard University, Carnegie-Mellon University, the University of Washington, the University of Toronto, HiOA (Norway), KTH (Sweden), Tel Aviv University (Israel), and many others. Chapters cover a broad range of topics relevant to the collection and analysis of HCI data, going beyond experimental design and surveys, to cover ethnography, diaries, physiological measurements, case studies, crowdsourcing, and other essential elements in the well-informed HCI researcher's toolkit. Continual technological evolution has led to an explosion of new techniques and a need for this updated 2nd edition, to reflect the most recent research in the field and newer trends in research methodology. This Research Methods in HCI revision contains updates throughout, including more detail on statistical tests, coding qualitative data, and data collection via mobile devices and sensors. Other new material covers performing research with children, older adults, and people with cognitive impairments. Comprehensive and updated guide to the latest research methodologies and approaches, and now available in EPUB3 format (choose any of the ePub or Mobi formats after purchase of the eBook). Expanded discussions of online datasets, crowdsourcing, statistical tests, coding qualitative data, laws and regulations relating to the use of human participants, and data collection via mobile devices and sensors New material on performing research with children, older adults, and people with cognitive impairments, two new case studies from Google and Yahoo!, and techniques for expanding the influence of your research to reach non-researcher audiences, including software developers and policymakers

Evaluation, Description and Invention

Activity Theory and Human-computer Interaction

Formal Methods in Human-Computer Interaction

Human Computer Interaction
Fundamentals and Practice
Human-Computer Interaction – INTERACT 2021

Although life continues to become increasingly embedded with interactive computing services that make our lives easier, human-computer interaction (HCI) has not been given the attention it deserves in the education of software developers at the undergraduate level. Most entry-level HCI textbooks are structured around high-level concepts and are not directly tied to the software development process. Filling this need, Human-Computer Interaction: Fundamentals and Practice supplies an accessible introduction to the entire cycle of HCI design and implementation□explaining the core HCI concepts behind each step. Designed around the overall development cycle for an interactive software product, it starts off by covering the fundamentals behind HCI. The text then quickly goes into the application of this knowledge. It covers the forming of HCI requirements, modeling the interaction process, designing the interface, implementing the resulting design, and evaluating the implemented product. Although this textbook is suitable for undergraduate students of computer science and information technology, it is accessible enough to be understood by those with minimal programming knowledge. Supplying readers with a firm foundation in the main HCI principles, the book provides a working knowledge of HCI-oriented software development. The core content of this book is based on the introductory HCI course (advanced junior or senior-level undergraduate) that the author has been teaching at Korea University for the past eight years. The book includes access to PowerPoint lecture slides as well as source code for the example applications used throughout the text.