

user research can be done cheaply, quickly and how results can be presented persuasively Gives readers the tools and confidence to perform user research on their own designs and tune their software user experience to the unique needs of their product and its users

This book constitutes the refereed proceedings of the 9th International Conference on Design, User Experience, and Usability, DUXU 2020, held as part of the 22nd International Conference on Human-Computer Interaction, HCII 2020, in Copenhagen, Denmark, in July 2020. The conference was held virtually due to the COVID-19 pandemic. From a total of 6326 submissions, a total of 1439 papers and 238 posters has been accepted for publication in the HCII 2020 proceedings. The 51 papers included in this volume were organized in topical sections on interactions in public, urban and rural contexts; UX design for health and well-being; DUXU for creativity, learning and collaboration; DUXU for culture and tourism.

Augmented reality (AR) and virtual reality (VR) provide flexibility in education and have become widely used for the promotion of multimedia learning. This use coincides with mobile devices becoming prevalent, VR devices becoming more affordable, and the creation of user-friendly software that allows the development of AR/VR applications by non-experts. However, because the integration of AR and VR into education is a fairly new practice that is only in its initial stage, these processes and outcomes need to be improved. Designing, Deploying, and Evaluating Virtual and Augmented Reality in Education is an essential research book that presents current practices and procedures from different technology-implementation stages (design, deployment, and evaluation) to help educators use AR/VR applications in their own teaching practices. The book provides comprehensive information on AR and VR applications in different educational settings from various perspectives including but not limited to mobile learning, formal/informal learning, and integration strategies with practical and/or theoretical implications. Barriers and challenges to their implementation that are currently faced by educators are also addressed. This book is ideal for academicians, instructors, curriculum designers, policymakers, instructional designers, researchers, education professionals, practitioners, and students.

Organizations value insights from reflexive, iterative processes of designing interactive environments that reflect user experience. "I really like this definition of experience architecture, which requires that we understand ecosystems of activity, rather than simply considering single-task scenarios."—Donald Norman (The Design of Everyday Things)

This book constitutes the refereed proceedings of the 8th International Conference on Games and Learning Alliance, GALA 2019, held in Athens, Greece, in November 2019. The 38 regular papers presented together with 19 poster papers were carefully reviewed and selected from 76 submissions. The papers cover the following topics: serious game design and pedagogical foundations; AI and technology for SG; gamification; applications and case studies; and posters. The chapter "Cyber Chronix, Participatory Research Approach to Develop and Evaluate a Storytelling Game on Personal Data Protection Rights and Privacy Risks" is available open access under a CC BY 4.0 license at link.springer.com.

This three volume set LNCS 12779, 12780, and 12781 constitutes the refereed proceedings of the 10th International Conference on Design, User Experience, and Usability, DUXU 2021, held as part of the 23rd International Conference, HCI International 2021, which took place in July 2021. Due to COVID-19 pandemic the conference was held virtually. The total of 1276 papers and 241 posters included in the 39 HCII 2021 proceedings volumes was carefully reviewed and selected from 5222 submissions. The papers of DUXU 2021, Part I, are organized in topical sections named: UX Design Methods and Techniques; Methods and Techniques for UX Research; Visual Languages and Information Visualization; Design Education and Practice.

The volume Automation Control Theory Perspectives in Intelligent Systems presents new approaches and methods to real-world problems, and in particular, exploratory research that describes novel approaches in the field of cybernetics and automation control theory. Particular emphasis is laid on modern trends in intelligent information technology, system monitoring and proactive management of complex objects The 5th Computer Science On-line Conference (CSOC2016) is intended to provide an international forum for discussions on the latest high-quality research results in all areas related to Computer Science. The addressed topics are the theoretical aspects and applications of Computer Science, Artificial Intelligences, Cybernetics, Automation Control Theory and Software Engineering. Aimed at software developers, this book proposes the creation of a new profession of software design. The examples in the text are updated to reflect new platforms along with additional case studies where appropriate.

This book gathers the proceedings of the Seventh Symposium on Hybrid RANS-LES Methods, which was held on September 17-19 in Berlin, Germany. The different chapters, written by leading experts, reports on the most recent developments in flow physics modelling, and gives a special emphasis to industrially relevant applications of hybrid RANS-LES methods and other turbulence-resolving modelling approaches. The book addresses academic researchers, graduate students, industrial engineers, as well as industrial R&D managers and consultants dealing with turbulence modelling, simulation and measurement, and with multidisciplinary applications of computational fluid dynamics (CFD), such as flow control, aero-acoustics, aero-elasticity and CFD-based multidisciplinary optimization. It discusses in particular advanced hybrid RANS-LES methods. Further topics include wall-modelled Large Eddy Simulation (WMLES) methods, embedded LES, Lattice-Boltzman methods and turbulence-resolving applications and a comparison of the LES methods with both hybrid RANS-LES and URANS methods. Overall, the book provides readers with a snapshot on the state-of-the-art in CFD and turbulence modelling, with a special focus to hybrid RANS-LES methods and their industrial applications.

This book constitutes the revised selected papers of the workshops of the 10th and 11th International Conference of Web-based Learning, ICWL 2011, held in Hong Kong, in December 2011 and ICWL 2012, held in Sinaia, Romania, in September 2012. This volume comprises papers from one symposium that took place both in 2011 and 2012 and four workshops (two from 2011 and two from 2012): 1. The 1st and 2nd International Symposium on Knowledge Management and E-Learning (KMEL2011 / 2012); 2. The 1st International Workshop on Enhancing Learning with Social (ELSM 2011); 3. The 4th International Workshop on Social and Personal Computing for Web-Supported Learning (SPeL 2011); 4. International Workshop on Learning within and from Smart Cities (SciLearn 2012); 5. International Workshop on Creative Collaboration through Supportive Technologies in Education (CCSTED 2012).

The four-volume set LNCS 11746–11749 constitutes the proceedings of the 17th IFIP TC 13 International Conference on Human-Computer Interaction, INTERACT 2019, held in Paphos, Cyprus, in September 2019. The total of 111 full papers presented together with 55 short papers and 48 other papers in these books was carefully reviewed and selected from 385 submissions. The contributions are organized in topical sections named: Part I: accessibility design principles; assistive technology for cognition and neurodevelopment disorders; assistive technology for mobility and rehabilitation; assistive technology for visually impaired; co-design and design methods; crowdsourcing and collaborative work; cyber security and e-voting systems; design methods; design principles for safety/critical systems. Part II: e-commerce; education and HCI curriculum I; education and HCI curriculum II; eye-gaze interaction; games and gamification; human-robot interaction and 3D interaction; information visualization; information visualization and augmented reality; interaction design for culture and development I. Part III: interaction design for culture and development II; interaction design for culture and development III; interaction in public spaces; interaction techniques for writing and drawing; methods for user studies; mobile HCI; personalization and recommender systems; pointing, touch, gesture and speech-based interaction techniques; social networks and social media interaction. Part IV:

user modelling and user studies; user experience; users' emotions, feelings and perception; virtual and augmented reality I; virtual and augmented reality II; wearable and tangible interaction; courses; demonstrations and installations; industry case studies; interactive posters; panels; workshops. The chapter 'Experiencing Materialized Reading: Individuals' Encounters with Books' is open access under a CC BY 4.0 license at link.springer.com. The chapter 'What Is Beautiful Continues to Be Good: People Images and Algorithmic Inferences on Physical Attractiveness' is open access under a CC BY 4.0 license at link.springer.com.

The human-computer interactions are more and more present in our everyday life, and lead to many conceptual and methodological problems for the designers and evaluators of interactive systems. This book is about Human-Computer Interaction in Transport domain, in which the traveler becomes a user of information systems, particularly before and during the travel(s). This book will focus on traveler information and personalized systems, using a human-centered design approach.

This book constitutes the refereed proceedings of the Third EAI International Conference on Smart Objects and Technologies for Social Good, GOODTECHS 2017, held in Pisa, Italy, November 29-30, 2017. The 38 revised full papers presented were carefully reviewed and selected from 70 submissions. The papers reflect the design, implementation, deployment, operation and evaluation of smart objects and technologies for social good. A social good can be understood as a service that benefits a large number of people in a most possible way. Some classic examples are healthcare, safety, environment, democracy, and human rights, or even art, entertainment, and communication.

This book brings together papers dealing with essential issues in applied linguistics and multilingualism that have been contributed by leading figures in these two fields and present state-of-the-art developments in theory and research. The first part includes articles touching on various aspects of multiple-language acquisition, with a particular emphasis on the role of affordances, the interfaces between language and thought, and factors influencing the process of language learning. Part Two deals with individual variations in the acquisition of additional languages, focusing in particular on the impact of such variables as age, aptitude, motivation and learning deficits. Finally, Part Three presents contributions illuminating key issues in the acquisition of different subsystems and skills, such as grammar, phonology, lexis and writing systems. Thanks to the diversity of perspectives on applied linguistics and multilingualism, as well as the cutting-edge nature of some of the proposals, this edited collection will be an important reference work and a source of inspiration for theorists and researchers.

The three-volume set LNCS 12762, 12763, and 12764 constitutes the refereed proceedings of the Human Computer Interaction thematic area of the 23rd International Conference on Human-Computer Interaction, HCII 2021, which took place virtually in July 2021. The total of 1276 papers and 241 posters included in the 39 HCII 2021 proceedings volumes was carefully reviewed and selected from 5222 submissions. The 139 papers included in this HCI 2021 proceedings were organized in topical sections as follows: Part I, Theory, Methods and Tools: HCI theory, education and practice; UX evaluation methods, techniques and tools; emotional and persuasive design; and emotions and cognition in HCI Part II, Interaction Techniques and Novel Applications: Novel interaction techniques; human-robot interaction; digital wellbeing; and HCI in surgery Part III, Design and User Experience Case Studies: Design case studies; user experience and technology acceptance studies; and HCI, social distancing, information, communication and work

"Design for Emotion' introduces you to the why, what, when, where and how of designing emotional experiences. Learn how to increase user engagement, loyalty and satisfaction by incorporating emotion and personality into your designs. This isn't just another book on design theory--it's exceptionally practical. The applications of emotion in design are explored through extensive real world examples. This book will help you improve the design of products, interfaces and applications while enhancing learning and understanding. The book introduces the A.C.T. Model (Attract/Converse/Transact), a framework for creating designs that intentionally trigger emotional responses."--Publisher description.

The three-volume set LNCS 10288, 10289, and 10290 constitutes the proceedings of the 6th International Conference on Design, User Experience, and Usability, DUXU 2017, held as part of the 19th International Conference on Human-Computer Interaction, HCII 2017, in Vancouver, BC, Canada, in July 2017, jointly with 14 other thematically similar conferences. The total of 1228 papers presented at the HCII 2017 conferences were carefully reviewed and selected from 4340 submissions. These papers address the latest research and development efforts and highlight the human aspects of design and use of computing systems. The papers accepted for presentation thoroughly cover the entire field of Human-Computer Interaction, addressing major advances in knowledge and effective use of computers in a variety of application areas. The total of 168 contributions included in the DUXU proceedings were carefully reviewed and selected for inclusion in this three-volume set. LNCS 10288: The 56 papers included in this volume are organized in topical sections on design thinking and design philosophy; aesthetics and perception in design; user experience evaluation methods and tools; user centered design in the software development lifecycle; DUXU education and training. LNCS 10289: The 56 papers included in this volume are organized in topical sections on persuasive and emotional design; mobile DUXU; designing the playing experience; designing the virtual, augmented and tangible experience; wearables and fashion technology. LNCS 10290: The 56 papers included in this volume are organized in topical sections on information design; understanding the user; DUXU for children and young users; DUXU for art, culture, tourism and environment; DUXU practice and case studies.

Consolidating existing knowledge in Design Science, this book proposes a new research method to aid the exploration of design and problem solving within business, science and technology. It seeks to overcome a dichotomy that exists in the field between theory and practice to enable researches to find solutions to problems, rather than focusing on the explanation and exploration of the problems themselves. Currently, researches concentrate on to describing, exploring, explaining and predicting phenomena, and little attention is devoted to prescribing solutions. Herbert Simon proposes the need to develop a Science of the Artificial (Design Science), arguing that our reality is much more artificial than natural. However, the research conducted on the Design Science premises has so far been scattered and erratic in different fields of research, such as management, systems information and engineering. This book aims to address this issue by bringing these fields together and emphasising the need for solutions. This book provides a valuable resource to students and researchers of research methods, information systems, management and management science, and production and operations management.

Despite advances in technology and Internet-inspired trends, successful interactive design remains firmly rooted in the principles of graphic design. Interactive Design 2 collects the best in graphic design from interactive environments created over the past two years. 200 color illustrations are featured, including color reproductions of websites, CDROMs, kiosks, and other

interactive media. The accompanying text explores the cultural and financial implications of the Net.

Covering key topics in the field such as technological innovation, human-centered sustainable engineering and manufacturing, and manufacture at a global scale in a virtual world, this book addresses both advanced techniques and industrial applications of key research in interactive design and manufacturing. Featuring the full papers presented at the 2014 Joint Conference on Mechanical Design Engineering and Advanced Manufacturing, which took place in June 2014 in Toulouse, France, it presents recent research and industrial success stories related to implementing interactive design and manufacturing solutions.

This book addresses the need for a comprehensive book on the design, synthesis, and characterization of synthetic carbohydrate-based polymeric materials along with their biological applications. The first two chapters cover the synthesis and self-assembly of glycopolymers and different techniques for creating these synthetic polymers. Subsequent chapters account for the preparation of block copolymers, branched glycopolymers, glycosurfaces, glycodendrimers, cationic glycopolymers, bioconjugates, glyconanoparticles and hydrogels. While these chapters comprehensively review the synthetic and characterization methods of those carbohydrate-based materials, their biological applications are discussed in detail.

This four-volume set (CCIS 643, 644, 645, 646) constitutes the refereed proceedings of the 16th Asia Simulation Conference and the First Autumn Simulation Multi-Conference, AsiaSim / SCS AutumnSim 2016, held in Beijing, China, in October 2016. The 265 revised full papers presented were carefully reviewed and selected from 651 submissions. The papers in this first volume of the set are organized in topical sections on modeling and simulation theory and methodology; model engineering for system of systems; high performance computing and simulation; modeling and simulation for smart city.

Designing Inclusive Interactions contains the proceedings of the fifth Cambridge Workshop on Universal Access and Assistive Technology (CWUAAT), incorporating the 8th Cambridge Workshop on Rehabilitation Robotics, held in Cambridge, England, in March 2010. It contains contributions from an international group of leading researchers in the fields of Universal Access and Assistive Technology. This conference will mainly focus on the following principal topics: 1. Designing assistive and rehabilitation technology for working and daily living environments 2. Measuring inclusion for the design of products for work and daily living 3. Inclusive interaction design and new technologies for inclusive design 4. Assembling new user data for inclusive design 5. The design of accessible and inclusive contexts: work and daily living environments 6. Business advantages and applications of inclusive design 7. Legislation, standards and government awareness of inclusive design

This book offers the first comprehensive yet critical overview of methods used to evaluate interaction between humans and social robots. It reviews commonly used evaluation methods, and shows that they are not always suitable for this purpose. Using representative case studies, the book identifies good and bad practices for evaluating human-robot interactions and proposes new standardized processes as well as recommendations, carefully developed on the basis of intensive discussions between specialists in various HRI-related disciplines, e.g. psychology, ethology, ergonomics, sociology, ethnography, robotics, and computer science. The book is the result of a close, long-standing collaboration between the editors and the invited contributors, including, but not limited to, their inspiring discussions at the workshop on Evaluation Methods Standardization for Human-Robot Interaction (EMSHRI), which have been organized yearly since 2015. By highlighting and weighing good and bad practices in evaluation design for HRI, the book will stimulate the scientific community to search for better solutions, take advantages of interdisciplinary collaborations, and encourage the development of new standards to accommodate the growing presence of robots in the day-to-day and social lives of human beings.

How the tools of design research can involve designers more directly with objects, products and services they design; from human-centered research methods to formal experimentation, process models, and application to real world design problems. The tools of design research, writes Brenda Laurel, will allow designers "to claim and direct the power of their profession." Often neglected in the various curricula of design schools, the new models of design research described in this book help designers to investigate people, form, and process in ways that can make their work more potent and more delightful. "At the very least," Peter Lunenfeld writes in the preface, "design research saves us from reinventing the wheel. At its best, a lively research methodology can reinvigorate the passion that so often fades after designers join the profession." The goal of the book is to introduce designers to the many research tools that can be used to inform design as well as to ideas about how and when to deploy them effectively. The chapter authors come from diverse institutions and enterprises, including Stanford University, MIT, Intel, Maxis, Studio Anybody, Sweden's HUMlab, and Big Blue Dot. Each has something to say about how designers make themselves better at what they do through research, and illustrates it with real world examples—case studies, anecdotes, and images. Topics of this multi-voice conversation include qualitative and quantitative methods, performance ethnography and design improvisation, trend research, cultural diversity, formal and structural research practice, tactical discussions of design research process, and case studies drawn from areas as unique as computer games, museum information systems, and movies. Interspersed throughout the book are one-page "demos," snapshots of the design research experience. Design Research charts the paths from research methods to research findings to design principles to design results and demonstrates the transformation of theory into a richly satisfying and more reliably successful practice.

We are extremely pleased to present a comprehensive book comprising a collection of research papers which is basically an outcome of the Second IFIP TC 13.6 Working Group conference on Human Work Interaction Design, HWID2009. The conference was held in Pune, India during October 7–8, 2009. It was hosted by the Centre for Development of Advanced Computing, India, and jointly organized with Copenhagen Business School, Denmark; Aarhus University, Denmark; and Indian Institute of Technology, Guwahati, India. The theme of HWID2009 was Usability in Social, Cultural and Organizational Contexts. The conference was held under the auspices of IFIP TC 13 on Human–Computer Interaction. 1 Technical Committee TC13 on Human–Computer Interaction The committees under IFIP include the Technical Committee TC13 on Human–Computer Interaction within which the work of this volume has been conducted. TC13 on Human–Computer Interaction has as its aim to encourage theoretical and empirical human science research to promote the design and evaluation of human-oriented ICT. Within TC13 there are different working groups concerned with different aspects of human– computer interaction. The flagship event of TC13 is the bi-annual international conference called INTERACT at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

