

## Editor-in-Chief

*Kai Rannenber, Goethe University Frankfurt, Germany*

## Editorial Board

TC 1 – Foundations of Computer Science

*Jacques Sakarovitch, Télécom ParisTech, France*

TC 2 – Software: Theory and Practice

*Michael Goedicke, University of Duisburg-Essen, Germany*

TC 3 – Education

*Arthur Tatnall, Victoria University, Melbourne, Australia*

TC 5 – Information Technology Applications

*Erich J. Neuhold, University of Vienna, Austria*

TC 6 – Communication Systems

*Aiko Pras, University of Twente, Enschede, The Netherlands*

TC 7 – System Modeling and Optimization

*Fredi Tröltzsch, TU Berlin, Germany*

TC 8 – Information Systems

*Jan Pries-Heje, Roskilde University, Denmark*

TC 9 – ICT and Society

*Diane Whitehouse, The Castlegate Consultancy, Malton, UK*

TC 10 – Computer Systems Technology

*Ricardo Reis, Federal University of Rio Grande do Sul, Porto Alegre, Brazil*

TC 11 – Security and Privacy Protection in Information Processing Systems

*Steven Furnell, Plymouth University, UK*

TC 12 – Artificial Intelligence

*Ulrich Furbach, University of Koblenz-Landau, Germany*

TC 13 – Human-Computer Interaction

*Jan Gulliksen, KTH Royal Institute of Technology, Stockholm, Sweden*

TC 14 – Entertainment Computing

*Matthias Rauterberg, Eindhoven University of Technology, The Netherlands*

## **IFIP – The International Federation for Information Processing**

IFIP was founded in 1960 under the auspices of UNESCO, following the first World Computer Congress held in Paris the previous year. A federation for societies working in information processing, IFIP's aim is two-fold: to support information processing in the countries of its members and to encourage technology transfer to developing nations. As its mission statement clearly states:

*IFIP is the global non-profit federation of societies of ICT professionals that aims at achieving a worldwide professional and socially responsible development and application of information and communication technologies.*

IFIP is a non-profit-making organization, run almost solely by 2500 volunteers. It operates through a number of technical committees and working groups, which organize events and publications. IFIP's events range from large international open conferences to working conferences and local seminars.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is generally smaller and occasionally by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is also rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

IFIP distinguishes three types of institutional membership: Country Representative Members, Members at Large, and Associate Members. The type of organization that can apply for membership is a wide variety and includes national or international societies of individual computer scientists/ICT professionals, associations or federations of such societies, government institutions/government related organizations, national or international research institutes or consortia, universities, academies of sciences, companies, national or international associations or federations of companies.

More information about this series at <http://www.springer.com/series/6102>

José Abdelnour-Nocera · Michele Strano  
Charles Ess · Maja Van der Velden  
Herbert Hrachovec (Eds.)

# Culture, Technology, Communication

## Common World, Different Futures

10th IFIP WG 13.8 International Conference, CaTaC 2016  
London, UK, June 15–17, 2016  
Revised Selected Papers

*Editors*

José Abdelnour-Nocera  
IT University of Copenhagen  
Copenhagen  
Denmark

and

M-ITI  
Funchal  
Portugal

Michele Strano  
Bridgewater College  
Bridgewater, VA  
USA

Charles Ess  
University of Oslo  
Oslo  
Norway

Maja Van der Velden  
University of Oslo  
Oslo  
Norway

Herbert Hrachovec  
University of Vienna  
Vienna  
Austria

ISSN 1868-4238                      ISSN 1868-422X (electronic)  
IFIP Advances in Information and Communication Technology  
ISBN 978-3-319-50108-6              ISBN 978-3-319-50109-3 (eBook)  
DOI 10.1007/978-3-319-50109-3

Library of Congress Control Number: 2016958991

© IFIP International Federation for Information Processing 2016

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

This Springer imprint is published by Springer Nature  
The registered company is Springer International Publishing AG  
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

## Preface

The eighth working group (WG 13.8) of the IFIP Technical Committee 13 on Human-Computer Interaction (HCI) was established in 2008 as a special interest group, and turned into a working group in 2014. The scope of this group is to support and develop the research, practice, and education capabilities of HCI in institutions and organizations based around the world, taking into account their diverse local needs and cultural perspectives; and also to develop links between the HCI community in general and other relevant communities involved in international development and cross-cultural aspects of ICT development. In an attempt to demonstrate links to other relevant communities interested in cultural aspects of ICT, this volume presents revised selected chapters from papers presented at the 10<sup>th</sup> Cultural Attitudes Towards Technology and Communication (CaTaC) conference organized jointly with WG 13.8. This working conference was held at the University of West London during June 15–17, in 2016 in Brentford, UK.

The chapters included in this volume explore the intersections between culture, technology, and communication, applying different theoretical and methodological perspectives, genres, and styles. Addressing the concerns of IFIP WG 13.8, the following pages include good examples of how to address challenges for design and innovation in the Global South. However, we will also see examples of design for community development outside of the Global South, as a way to understand points of convergence and divergence.

Since 1998 the CaTaC conference series has fostered a distinctive conference culture, one that is remarkably interdisciplinary and critical, on the one hand, but at the same time, exceptionally supportive and collegial. Fast forward 2016, and the CaTaC community still continues to encourage scholars to explore, try out new ideas and approaches, and offer their best critical insights, but always only in a collaborative spirit that rests on our shared conviction that we are all in this together, however seriously our academic lives require us to focus on our own achievements and progress. It was an honor for WG 13.8 to be a co-protagonist of this edition.

We hope this book becomes a resource for the type of discussion topics that took place at the working conference in London. Culture remains a contested concept and phenomenon for humanists and social science scholars, and its value for ICT academics and professionals regularly comes into question. However, the concept of culture provides the signifiers that allow us to reflect on our condition of symbolic beings driven by beliefs and emotions. This in turn allows to think of the need for technologies to be more human, and to be able to do something about it.

November 2016

José Abdelnour-Nocera  
Michele Strano  
Charles Ess  
Maja van der Velden  
Herbert Hrachovec

# Organization

## Organizing Committee

Charles Ess	University of Oslo, Norway (Co-chair)
Maja van der Velden	University of Oslo, Norway (Co-chair)
José Abdelnour Nocera	University of West London, UK (Local Chair)
Michele Strano	Bridgewater College, Virginia, USA (Program Chair)
Herbert Hrachovec	University of Vienna, Austria (Program Committee)

## Program Committee

Jose Abdelnour Nocera	University of West London, UK
Yeslam Al-Saggaf	Charles Sturt University, Australia
Miguel Angel Perez Alvarez	Universidad Nacional Autónoma de México, Mexico
Josu Amezaga Albizu	University of the Basque Country, Spain
Beverly Bickel	University of Maryland, Baltimore County, USA
Johanna L.H. Birkland	Syracuse University, USA
Danielle Brady	Edith Cowan University, Australia
Daniel Gonzalez Cabrero	University of West London, UK
Michael Dahan	Sapir College, Israel
Laurel Dyson	University of Technology, Sydney, Australia
Charles Ess	University of Oslo, Norway
Catia Ferreira	CECC, Catholic University of Portugal, Portugal
Suely Fragoso	Federal University of Rio Grande do Sul, Brazil
Lelia Rosalind Green	Edith Cowan University, Australia
Lorna Heaton	Université de Montréal, Canada
Herbert Hrachovec	University of Vienna, Austria
Ang Peng Hwa	Nanyang Technological University, Singapore
Michelle Kaarst-Brown	Syracuse University, USA
Anita Komlodi	UMBC, USA
Melanie K. Laliker	Bridgewater College, USA
Makoto Nakada	University of Tsukuba, Japan
Luiz Lazos Ramírez	Universidad Nacional Autónoma de México, Mexico
Jerneja Rebernak	University of the Arts London, UK
Breno Maciel Souza Reis	Federal University of Rio Grande do Sul, Brazil
Thomas Richter	University of Duisburg-Essen, Germany
Patrizia Schettino	University of Lugano, Svizzera, Switzerland
Andra Siibak	University of Tartu, Estonia

Michele Strano	Bridgewater College, USA
Maja van der Velden	University of Oslo, Norway
Heike Wanschiers-Theophilus	Namibia University of Science and Technology, Namibia

## **Sponsors**

IFIP International Federation for Information Processing  
University of West London  
University of Oslo

# Contents

On Persuading an OvaHerero Community to Join the Wikipedia Community . . . . .	1
<i>Mark Mushiba, Peter Gallert, and Heike Winschiers-Theophilus</i>	
Cultures of Science and Technology in the Trading Zone: Biodiversity and Open Source Development . . . . .	19
<i>Lorna Heaton and Patricia Dias da Silva</i>	
Design as Regulation: Opportunities and Limitations for Sustainable Mobile Phone Design . . . . .	32
<i>Maja van der Velden</i>	
Exploring the Contribution of Design to Mobile Technology Uptake in a Remote Region of Australia . . . . .	55
<i>Fiona Brady and Laurel Evelyn Dyson</i>	
Technologies as a Means, Meetings as an End: Urban Interactions of a Migrant Community in Rio de Janeiro, Brazil, Mobilized Through WhatsApp . . . . .	68
<i>Robson da Silva Braga</i>	
Innovation Processes in Indigenous Communities in the North - Cultural, Psychological and Technological Knowledge in Practice . . . . .	82
<i>Eva Carlsdotter Schjetne and Synnøve Thomassen Andersen</i>	
Reconceptualising Personas Across Cultures: Archetypes, Stereotypes & Collective Personas in Pastoral Namibia . . . . .	96
<i>Daniel G. Cabrero, Heike Winschiers-Theophilus, and José Abdelnour-Nocera</i>	
Communicative Ecologies and the Value of MyFireWatch to the Community of Kununurra . . . . .	110
<i>Lelia Green and Donell J. Holloway</i>	
Ludic Re-enchantment and the Power of Locative Games: A Case Study of the Game Ingress . . . . .	131
<i>Suely Fragoso and Breno Maciel Souza Reis</i>	
<b>Author Index . . . . .</b>	<b>149</b>