Programme

INTERACT 2013

14th IFIP TC13 Conference on Human-Computer Interaction, Cape Town, South Africa, September 2013

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WELCOME

INTERACT 2013 is the 14th of a series of INTERACT international conferences supported by the International Federation for Information Processing (IFIP) Technical Committee 13 on Human–Computer Interaction (HCI). INTERACT 2013 is taking place 29 years after the first INTERACT held in September 1984 in London, UK. The IFIP Technical Committee 13 aims to develop the science and technology of the interaction between humans and computing devices through different Working Groups and Special Interests Groups, all of which, together with their officers, are listed within these proceedings.

INTERACT 2013 brought the Conference to South Africa and Africa for the very first time; to the very southern tip of Africa and the beautiful city of Cape Town. The African tradition of HCI focuses very much on the human and social aspects of HCI, recognizing the diversity of its people and the context in which they go about their everyday lives. We hope that INTERACT 2013 will be remembered as a conference that brought the diversity of HCI research to the forefront, making the digital world a better place for all, regardless of where they come from.

Like its predecessors, INTERACT 2013 highlights, to both the academic and the industrial world, the importance of the HCI discipline and its most recent breakthroughs on current applications. Both experienced HCI researchers and professionals, as well as newcomers to the HCI field, interested in designing or evaluating interactive software, developing new interaction technologies, or investigating overarching theories of HCI, would find INTERACT 2013 an exciting forum for communication with people of similar interests, to encourage collaboration and to learn.

The Conference theme for INTERACT 2013, 'Designing for Diversity', recognizes the interdisciplinary, multidisciplinary and intercultural spirit of HCI research and practice. The Conference welcomes research and reports of practice that acknowledges diverse disciplines, abilities, cultures and societies, which address both the technical and social aspects of HCI. Within the broad umbrella of HCI, the Conference sought contributions addressing new and emerging HCI disciplines, bridging cultural differences, and tackling important social problems.

INTERACT 2013 is organized by the Nelson Mandela Metropolitan University (Port Elizabeth) and the Meraka Institute of Council for Scientific and Industrial Research (Pretoria), in collaboration with the University of Cape Town.

We thank all the authors and the presenters who chose INTERACT 2013 as the venue to publish their research. This was again an outstanding year for the Conference in terms of submissions in all the technical categories, especially since the Conference moved away from the traditional predominantly European venues. In total, we received 639 submissions. Of these 270 submissions were accepted:
- 128 as full research papers.
- 77 as short research papers.
- 31 as interactive posters.
- 2 as industrial programme papers.
- 4 as panels.
- 1 as a special interest group.
- 1 as a tutorial.
- 9 as workshops.
- 9 to the African Masters Consortium.
- 8 to the Doctoral Consortium.

The acceptance rate for the full and short research papers was 31% and 45% respectively.

A Programme Committee meeting consisting of the Technical Programme Chairs and the Track Chairs, as well as member of IFIP Technical Committee 13, deliberated the final decision on which submissions to accept. This significant effort was only possible due to the diligent work of many people. Our sincere gratitude goes to the almost 700 members of our International Programme Committee who willingly assisted and ensured the high quality of the INTERACT Conference papers was properly maintained. Although some people had to be bullied into reviewing (sorry about that), everyone submitted their reviews on time without a murmur of complaint. Thank you all for the effort that you so obviously put into this task. A special thank you must go to our Track Chairs, who have put in a

tremendous amount of work to ensure that quality was maintained throughout.

In addition we have to thank the members of the Organizing Committee, the staff at the Council for Industrial and Scientific Research, Nelson Mandela Metropolitan University and the University of Cape Town for their unflagging assistance with all aspects of planning and managing the many administrative and organizational issues. We also have to thank our student volunteers for making sure that everything runs smoothly at the Conference itself.

We also have to thanks the staff of the Cape Town International Convention Centre and their associated service providers, the staff and service providers of the Clock Tower Pavilion and the staff and service providers of the Two Oceans Aquarium, for the professional way in which they handled the arrangements and logistics related to the Conference.

We also wish to express a special thank you to the Proceedings Publication Chair, Marco Winckler, who painstakingly put the proceedings volumes together.

Finally, we have to thank the many individuals who volunteered to assist with organising the Conference and making sure everything runs smoothly during the Conference.

We hope you enjoy INTERACT 2013 to the fullest, experience South African hospitality at its very best, and have great fun in the most beautiful city in the world, Cape Town, nestling on the slopes of one of the New 7 Wonders of the World, Table Mountain.

Paula Kotzé and Janet Wesson **(INTERACT 2013 Conference Chairs)**
Gary Marsden and Gitte Lindgaard **(INTERACT 2013 Technical Programme Chairs)**
September 2013

MONDAY 2 SEPTEMBER 2013

07:30 – 8:45: Registration for Monday Workshops and Masters Consortium only
Venue: Jasminum and Strelitzia Conservatories

07:30 – 8:45: Welcome Refreshments
Venue: Jasminum and Strelitzia Conservatories

9:30 – 17:00: Registration for Tuesday Workshops, Tutorial and Consortium, as well as for the Main INTERACT 2013 Conference
Venue: Jasminum and Strelitzia Conservatories

9:00 – 17:00: Workshops and Consortiums

Day Schedule
- Session 1: 9:00 – 10:30
- Mid-morning Refreshments: 10:30 – 11:00
- Session 2: 11:00 – 12:30
- Lunch: 12:30 – 13:30
- Session 3: 13:30 – 15:00
- Mid-afternoon Refreshments: 15:00 – 15:30
- Session 4: 15:30 – 17:00
- 17:00 – 19:30: IFIP TC 13 Working Group Business Meetings

Time: 09:00 – 17:00 Venue: Room 1.41	**Workshop: Building Community Collaboration** **Workshop facilitators**: *Anicia Peters, Darelle van Greunen, Heike Winschiers-Theophilus, Shilumbe Chivuno-Kuria, Kagonya Awori and Anirudha Joshi*

Time: 09:00 – 17:00 Venue: Room 1.42	**Workshop: Challenges from the Future: bridging the gaps through HCI education** **Workshop facilitators:** *Lars Oestreicher and Paula Alexandra Silva*

Time: 09:00 – 17:00 Venue: Room 1.43	**Workshop: Human Work Interaction Design (HWID): past history and future challenges** **Workshop facilitators:** *Torkil Clemmensen, Jose Abdelnour Nocer and Arminda Lopes*

Time: 17:30 – 19:30 Venue: Room 1.43	**WG 13.6 (Human Work Interaction Design) Business Meeting** (Chair: Torkil Clemmensen)

Time: 09:00 – 17:00 Venue: Room 1.44	**Workshop: Rethinking Universal Accessibility: A broader approach considering the digital gap** **Workshop facilitators:** *Julio Abascal, Simone D. J. Barbosa, Andrew Dearden, Anirudha Joshi, Daniel Orwa Ochieng, Gerhard Weber and Panayiotis Zaphiris*

Time: 09:00 – 17:00 Venue: Room 1.61	**Workshop: Walking for Data** **Workshop facilitators:** *Mads Bødker, David Browning and Nina Dam Meinhardt*

Time: 09:00 – 17:00 Venue: Room 1.62	**African Masters Consortium**

TUESDAY 3 SEPTEMBER 2013

07:30 – 8:45: Registration for Tuesday Workshops, Tutorial and Doctoral Consortium only
Venue: Jasminum and Strelitzia Conservatories

07:30 – 8:45: Welcome Refreshments
Venue: Jasminum and Strelitzia Conservatories

9:30 – 17:00: Registration for Tuesday Workshops, Tutorial and Consortium, as well as for the Main INTERACT 2013 Conference
Venue: Jasminum and Strelitzia Conservatories

9:00 – 17:00: Workshops and Consortiums

Day Schedule
- Session 1: 9:00 – 10:30
- Mid-morning refreshments: 10:30 – 11:00
- Session 2: 11:00 – 12:30
- Lunch: 12:30 – 13:30
- Session 3: 13:30 – 15:00
- Mid-afternoon refreshments: 15:00 – 15:30
- Session 4: 15:30 – 17:00
- 17:00 – 19:30: IFIP TC 13 Working Group business meetings

Time: 09:00 – 17:00 Venue: Room 1.41	**Workshop: Peripheral Interaction: embedding HCI in everyday life** **Workshop facilitators:** *Doris Hausen, Saskia Bakker, Elise van den Hoven, Andreas Butz and Berry Eggen*

Time: 09:00 – 17:00 Venue: Room 1.42	**Workshop: Participatory Design for Persons with Cognitive or Sensory Impairments** **Workshop facilitators:** *Karin Slegers, Pieter Duysburgh, Niels Hendriks and Helma van Rijn*

Time: 09:00 – 17:00 Venue: Room 1.43	**Workshop: Second International Workshop on (Re)Creating Lively Cities through Ambient Technologies: Arts, Culture and Gastronomic Experiences** **Workshop facilitators:** *Artur Lugmayr, Jaz Hee-jeong Choi and Kirralie Houghton*

Time: 09:00 – 17:00 Venue: Room 1.44	**Workshop: Urban Agriculture: A Growing Field of Research** **Workshop facilitators**: *Peter Lyle, Jaz Hee-jeong Choi, Shaun Lawson, Christopher Lueg, Alan Chamberlain, Marcus Foth, Anna Meroni and Margot Brereton*

Time: 09:00 – 17:00 Venue: Room 1.61	**Tutorial : Designing High-Quality Surveys for HCI Research** **Tutorial Presenters:** *Hendrik Müller and Aaron Sedley*

Time: 09:00 – 17:00 Venue: Room 1.62	**Doctoral Consortium**

WEDNESDAY 4 SEPTEMBER 2013

07:30 – 8:45: Registration and Welcome Refreshments
Venue: Jasminum and Strelitzia Conservatories

Day Schedule

- Plenary Session : 08:45 – 10:45
- Mid-morning refreshments: 10:45 – 11:15
- Parallel Sessions: 11:15 – 12:30
- Lunch: 12:30 – 13:30
- Parallel Sessions: 13:30 – 15:00
- Mid-afternoon refreshments: 15:00 – 15:30
- Parallel Sessions: 15:30 – 17:00
- 17:00 – 18:30: IFIP TC 13 Working Group business meetings
- 19:00 – 21: 30: Conference Reception

08:45 – 10:45: Plenary Session
Venue: Auditorium 2

8:45 – 9:45: INTERACT 2013 Conference Opening
Welcome Address
IFIP TC 13 Award Ceremony
Session Chairs: Paula Kotzé and Janet Wesson (South Africa)

9:45 – 10:45: Keynote Address: *Abigail Sellen*
Session Chair: Gary Marsden (South Africa)

Topic: Designing Hybrid Input Paradigms
Visions of multimodal interaction with computers are as old as the field of HCI itself: by adding voice, gesture, gaze and other forms of input, the hope is that engaging with computers might be more efficient, expressive and natural. Yet it is only in the last decade that the dominance of multi-touch and the rise of gesture-based interaction are radically altering the ways we interact with computers. On the one hand these changes are inspirational and open up the design space; on the other hand, it has caused fractionation in interface design and added complexity for users. Many of these complexities are caused by layering new forms of input on top of existing systems and practices. I will discuss our own recent adventures in trying to design and implement these hybrid forms of input, and highlight the challenges and the opportunities for future input paradigms. In particular, I conclude that the acid test for any of these new techniques is testing in the wild. Only then can we really design for diversity of people and of experiences.

About Abigail Sellen:
Abigail Sellen is a Principal Researcher at Microsoft Research Cambridge UK and co-manager of Socio-Digital Systems, an interdisciplinary group with a focus on the human perspective in computing. Originally graduating with a PhD in Cognitive Science, and a Master's in Industrial Engineering, her career has spanned industrial research labs such as Apple Computer, Xerox's Cambridge Research Centre and Hewlett Packard, Bristol. She has published widely in Human-Computer Interaction, including "The Myth of the Paperless Office" with co-author Richard Harper, which won an IEEE award. She is a Fellow of the British Computer Society, a Professor of Interaction at the University of Nottingham, a member of the ACM CHI Academy, and in 2011 was elected a Fellow of the Royal Academy of Engineering**.**

10:45 - 11:15: Mid-morning refreshments
Venue: Jasminum and Strelitzia Conservatories

11:15 – 12:30: Parallel Sessions

Industry Day Keynote: *Susan Dray*
Time: 11:15 – 12:30
Venue: Auditorium 2
Session Chair: Shikoh Gitau (Kenya)

Topic: What Africa can teach the rest of the world (and what it can learn)
As African companies become more and more engaged with human-centered design, it is important to remember that there is much that Africa can teach the world at the same time that there is much Africa can learn from the rest of the world. In this talk, I will focus on three lessons from Africa that I believe the rest of the world can and should learn. I will also discuss three things that I believe will be important for African companies to learn from the process of design from outside the continent.

About Susan Dray:
Susan Dray has worked to improve the fit between technology and people since 1979, initially as a member of a human factors research group at Honeywell, and later championing usability of corporate systems at American Express. Since founding her consulting firm, Dray & Associates, in 1993, she has helped clients create innovative products and services that are useful, usable, and desirable by providing user experience research for a wide range of products, systems, and applications. She has worked in many countries around the world, and is widely known for her expertise in international user studies.

Through her many professional activities, Susan has contributed to the development of the user experience, user centered design, and usability professions. She is a Fellow of the Human Factors and Ergonomics Society, recipient of the Lifetime Service Award from the Association for Computing Machinery Special Interest Group in Computer Human Interaction (ACM-SIGCHI) and was named a Distinguished Engineer of ACM. She is currently the Director of Publications on the Board of Directors of the User Experience Professionals Association.

Road Safety
Time: 11:15 – 12:30
Venue: Room 1.41
Session Chair: Stephen Brewster (UK)
(L) Don't Text while Driving: the effect of smartphone text messaging on road safety during simulated driving
Kaspar Lyngsie, Martin S. Pedersen, Jan Stage and Kim F. Vestergaard

(L) Assisting the Driver with Distance Estimation: usability evaluation of graphical presentation alternatives for local traffic events
Angela Mahr, Sandro Castronovo, Rafael Math and Christian Müller

(S) Culturally Independent Gestures for In-Car Interactions
Sebastian Loehmann, Martin Knobel, Melanie Lamara and Andreas Butz

Tracking eyes and head
Time: 11:15 – 12:30
Venue: Room 1.42
Session Chair: Helene Gelderblom (South Africa)

(L) Studying a Head Tracking Technique for First-Person-Shooter Games in a Home Setting
Torben Sko, Henry Gardner and Michael Martin

(L) One Half or 50%? An Eye-Tracking Study of Number Representation Readability
Luz Rello, Susana Bautista, Ricardo Baeza-Yates, Pablo Gervás, Raquel Hervás and Horacio Saggion

(S) Tracking Eyes in Service Prototyping
Monchu Chen and Veranika Lim

Usability evaluation and Technology acceptance
Time: 11:15 – 12:30
Venue: Room 1.43
Session Chair: Helen Petrie (UK)

(L) Social Overlays: collectively making websites more usable
Tao Dong, Mark S. Ackerman, Mark W. Newman and Gaurav Paruthi

(S) Understanding Diversity – The Impact of Personality on Technology Acceptance
Kay Behrenbruch, Matthias Soellner, Jan Marco Leimeister and Ludger Schmidt

(S) Did We Miss Something? Correspondence Analysis of Usability Data
Stanislaw Zabramski and Wolfgang

(S) Usability Evaluation in a Digitally Emerging Country: a survey study
Fulvio Lizano, Maria Marta Sandoval, Anders Brunn and Jan Stage Stuerzlinger

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User requirements capture and analysis
Time: 11:15 – 12:30
Venue: Room 1.44
Session Chair: Netta Iivari (Finland)

(L) Designing for the Functionality South African Internet Banking Websites should provide to address the Needs of Generation-Y users
Sebabatso Mtimkulu, Judy van Biljon and Toby van Dyk

(L) "Nobody Other than me Knows what I Want": customizing a sports watch
Piia Nurkka

(S) Online Requirements and Portal Design for Female University Science & Technology Students in Kenya
Stephen Kimani, Eunice Njeri, and John Njue

Design and evaluation
Time: 11:15 – 12:30
Venue: Room 1.61
Session Chair: Lars Oestreicher (Sweden)

(L) WATTSBurning: design and evaluation of an innovative eco-feedback system
Filipe Quintal, Lucas Pereira, Nuno Nunes, Valentina Nisi and Mary Barreto

(S) The Influence of Website Category on Aesthetic Preferences
Eleftherios Papachristos and Nikolaos Avouris

S :Homestead Creator: using card sorting in search for culture-aware categorizations of interface objects
Kasper Rodil, Matthias Rehm and Heike Winschiers-Theophilus

(L) Evaluating Multivariate Visualizations as Multi-Objective Decision Aids
Meirav Taieb-Maimon, Lior Limonad, David Amid, David Boaz and Ateret Anaby-Tavor

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Facilitating social behaviour and collaboration I
Time: 11:15 – 12:30
Venue: Room 1.63
Session Chair: Anicia Peters (USA)

(L) Performing Online and Offline: how DJs use social networks
Mayur Karnik, Ian Oakley and Valentina Nisi

(L) Tension Space Analysis: exploring community requirements for networked urban screens
Steve North, Holger Schnädelbach, Ava Fatah gen Schieck, Wallis Motta, Lei Ye, Moritz Behrens and Efstathia Kostopoulou

(S) A Tabletop System Using Infrared Image Recognition for Multi-user Identification
Shota Suto and Susumu Shibusawa

Gesture and tactile user interfaces
Time: 11:15 – 12:30
Venue: Room 1.63
Session Chair: Beryl Plimmer (New Zealand)

(L) TactiPEd: easy prototyping of tactile patterns
Sabrina Panëels, Margarita Anastassova and Lucie Brunet

(L) Metamodels Infrastructure and Heuristics for Metamodel-Driven Multi-Touch Interaction
Víctor López-Jaquero, Elena Navarro, Francisco Montero and Pascual González

(S) Designing Gesture-Based Control for Factory Automation
Tomi Heimonen, Jaakko Hakulinen, Markku Turunen, Jussi P. P. Jokinen, Tuuli Keskinen and Roope Raisamo

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12:30 – 13:30: Lunch
Venue: Jasminum and Strelitzia Conservatories

13:30 – 15:00: Parallel Sessions

Industry Day - Papers
Time: 13:30 – 15:00
Venue: Auditorium 2
Session Chair: Jacki O'Neill (France)

Lessons Learned from Designing Non-traditional Interfaces for Educational Applications in South Africa
Michael Wolf

The Bigger Picture: The Use of Mobile Photos in Shopping
Maryam Tohidi and Andrew Warr

Navigation aids
Time: 13:30 – 15:00
Venue: Room 1.42
Session Chair: Sidney Fels (Canada)

(L) User-centric vs. System-centric Evaluation of Recommender Systems
Paolo Cremonesi, Franca Garzotto and Roberto Turrin

(L) Video Navigation with a Personal Viewing History
Abir Al-Hajri, Gregor Miller, Sidney Fels and Matthew Fong

(L) Hoptrees: branching history navigation for hierarchies
Michael Brooks, Jevin D. West, Cecilia R. Aragon and Carl T. Bergstrom

Seniors and usability
Time: 13:30 – 15:00
Venue: Room 1.41
Session Chair: Shilumbe Chivuno-Kuria (Namibia)

(L) Ageing, Technology Anxiety and Intuitive Use of Complex Interfaces
Raghavendra Reddy Gudur, Alethea Blackler, Vesna Popovic and Doug Mahar

(L) Question-Answer Cards for an Inclusive Micro-Tasking Framework for the Elderly
Masatomo Kobayashi, Tatsuya Ishihara, Akihiro Kosugi, Hironobu Takagi and Chieko Asakawa

(S) Emerging Technologies and the Contextual and Contingent Experiences of Ageing Well
Toni Robertson, Jeannette Durick, Margot Brereton, Kate Vaisutis, Frank Vetere, Bjorn Nansen and Steve Howard

User preferences and behaviour
Time: 13:30 – 15:00
Venue: Room 1.43
Session Chair: Torkil Clemmensen (Denmark)

(L) Characteristics of Elderly User Behavior on Mobile Multi-Touch Devices
Susumu Harada, Daisuke Sato, Hironobu Takagi and Chieko Asakawa

(S) On Users' Preference on Localized vs. Latin-based CAPTCHA Challenges
Christos Fidas and Artemios Vogiatzis

(S) A Vocabulary to Access Users' Cultural Perspectives in Human-Computer Interaction
Catia Maria Dias Ferreira, Luciana Cardoso de Castro Salgado and Clarisse Sieckenius de Souza
(S) Going Global With Personas
Lene Nielsen, Kira Storgaard Nielsen, Jan Stage and Jane Billestrup

(S) From Persona to Techsona
Susanne Bødker and Clemens Nylandsted Klokmose

Designing with- and for people with special needs
Time: 13:30 – 15:00
Venue: Room 1.44
Session Chair: Renette Blignaut (South Africa)

(L) Navigating, Discovering and Exploring the Web: strategies used by people with print disabilities on interactive websites
Christopher Power, Helen Petrie, David Swallow, Emma Murphy, Bláithín Gallagher and Carlos A. Velasco

(L) Participatory Design with Blind Users: A Scenario-based Approach
Nuzhah Gooda Sahib, Tony Stockman, Anastasios Tombros and Oussama Metatla

(L) Designing With Dementia: guidelines for participatory design together with persons with dementia
Niels Hendriks, Frederik Truyen and Erik Duval

Augmented Reality
Time: 13:30 – 15:00
Venue: Room 1.61
Session Chair: Edwin Blake (South Africa)

(L) Precise Pointing Techniques for Handheld Augmented Reality
Thomas Vincent, Laurence Nigay and Takeshi Kurata

(L) The Unadorned Desk: Exploiting the Physical Space around a Display as an Input Canvas
Doris Hausen, Sebastian Boring and Saul Greenberg

(L) Funneling and Saltation Effects for Tactile Interaction with "Detached" Out of the Body Virtual Objects
Jaedong Lee, Sangyong Lee and Gerard J. Kim

Design and evaluation of prototypes
Time: 13:30 – 15:00
Venue: Room 1.62
Session Chair: Peter Dalsgaard (Denmark)

(L) The Effect of Physicality on Low Fidelity Interactive Prototyping for Design Practice
Joanna Hare, Steve Gill, Gareth Loudon and Alan Lewis
(S) Finding-NEVO: toward radical design in HCI
Sharon Lynn Chu, Francis Quek, Yao Wang and Rex Hartson

(S) The Design and Usability Testing of DACADE – a tool supporting systematic data collection and analysis for design students
Madihah Sheikh Abdul Aziz, Gitte Lindgaard and TW Allan Whitfield

(S) Method Card Design Dimensions: a survey of card-based design tools
Christiane Wölfel and Timothy Merritt

Gesture-based user interface design and interaction
Time: 13:30 – 15:00
Venue: Room 1.63
Session Chair: Janet Wesson (South Africa)

(L) Towards Many Gestures to One Command: a user study for tabletops
Yosra Rekik, Laurent Grisoni and Nicolas Roussel

(L) User-Defined Gestures for Augmented Reality
Thammathip Piumsomboon, Adrian Clark, Mark Billinghurst and Andy Cockburn

(L) User-Defined Body Gestures for an Interactive Storytelling Scenario
Felix Kistler and Elisabeth André

Multimodality, cross-platform studies
Time: 13:30 – 15:00
Venue: Room 1.64
Session Chair: Nuno Nunes (Portugal)

(L) Cross-Communicability: evaluating the meta-communication of cross-platform applications
Rodrigo de A. Maués and Simone Diniz Junqueira Barbosa

(L) 3D Visualization and Multimodal Interaction with Temporal Information Using Timelines
Giannis Drossis Dimitris Grammenos, Ilia Adami and Constantine Stephanidis

(S) Activity Theory as a Tool for Identifying Design Patterns in Cross-modal Collaborative Interaction
Oussama Metatla, Nick Bryan-Kinns, Tony Stockman and Fiore Martin

15:00 – 15:30: Mid-afternoon refreshments
Venue: Jasminum and Strelitzia Conservatories

15:30 – 17:00: Parallel Sessions

Industry Day - Panel
Time: 15:30 – 17:00
Venue: Auditorium 2
Session Chair: Susan Dray (USA)

Human-centred Design: What's happening in African Industry?
Susan Dray, Phil Barrett, Mark Kamau, Edna Chelule, Tamara Alsheikh

Display manipulations
Time: 15:30 – 17:00
Venue: Room 1.41
Session Chair: Luís Carriço (Portugal)

(L) An Evaluation of Stacking and Tiling Features within the Traditional Desktop Metaphor
Clemens Zeidler, Christof Lutteroth and Gerald Weber

(L) Semi-Supervised Learning based Aesthetic Classifier for Short Animations Embedded in Web Pages
Dipak Bansal and Samit Bhattacharya

(S) Investigating Pointing Tasks across Angularly Coupled Display Areas
Fabian Hennecke, Alexander De Luca, Ngo Dieu Huong Nguyen, Sebastian Boring and Andreas Butz

(S) Switchback Cursor: mouse cursor operation for overlapped windowing
Shota Yamanaka and Homei Miyashita

Mobile usage and techniques
Time: 15:30 – 17:00
Venue: Room 1.42
Session Chair: Isabella Venter (South Africa)

(L) PointerPhone: Using Mobile Phones for Direct Pointing Interactions with Remote Displays
Julian Seifert, Andreas Bayer and Enrico Rukzio

(L) Situating Asynchronous Voice in Rural Africa
Nicola J Bidwell and Masbulele Jay Siya

(L) Designing Mobile Phone Interfaces for Age Diversity in South Africa: "One-World" versus Diverse "Islands"
Karen Renaud, Rénette Blignaut, Isabella Venter

Passwords: e-authentication
Time: 15:30 – 17:00
Venue: Room 1.43
Session Chair: Anirudha Joshi (India)

(L) A Comprehensive Study of the Usability of Multiple Graphical Passwords
Soumyadeb Chowdhury, Ron Poet and Lewis Mackenzie

(L) Security for Diversity: studying the effects of verbal and imagery processes on user authentication mechanisms
Marios Belk, Christos Fidas, Panagiotis Germanakos and George Samaras

(S) Survival of the Shortest: a retrospective analysis of influencing factors on password composition
Emanuel von Zezschwitz, Alexander De Luca and Heinrich Hussmann

(S) Travel Routes or Geography Facts? An Evaluation of Voice Authentication User Interfaces
Alina Hang, Alexander De Luca, Katharina Frison, Emanuel von Zezschwitz, Massimo Tedesco, Marcel Kockmann and Heinrich Hussmann

Design to support creativity
Time: 15:30 – 17:00
Venue: Room 1.44
Session Chair: Simone Barbosa (Brazil)

(L) Systematic Integration of Solution Elements: How Does Digital Creativity Support Change Group Dynamics?
Florian Perteneder, Susann Hahnwald, Michael Haller and Kurt Gaubinger

(L) Evocative Computing – Creating Meaningful Lasting Experiences in Connecting with the Past
Janet van der Linden, Yvonne Rogers, Tim Coughlan, Anne Adams, Caroline Wilson, Pablo Haya, Estefanía Martín and Trevor Collins

(L) CapTUI: Geometric Drawing with Tangibles on a Capacitive Multi-touch Display
Rachel Blagojevic and Beryl Plimmer

Gesture-based user interface design and interaction II
Time: 15:30 – 17:00
Venue: Room 1.61
Session Chair: Jan Stage (Denmark)

(L) Gesture-Based Interaction in Domotic Environments: state of the art and HCI framework inspired by the diversity
Ana Carla de Carvalho Correia, Leonardo Cunha de Miranda and Heiko Hornung

(L) Thumbs Up: 3D gesture input on mobile phones using the front facing camera
Paul Schmieder, John Hosking, Andrew Luxton-Reilly and Beryl Plimmer

(L) User & System Cross-Learning of Gesture Commands on Pen-Based Devices
PeiYu Li, Manuel Bouillon, Eric Anquetil and Grégoire Richard

Cognitive workload and decision support
Time: 15:30 – 17:00
Venue: Room 1.62
Session Chair: Gitte Lindgaard (Australia)

(L) Ambient Timer – Unobtrusively Reminding Users of Upcoming Tasks with Ambient Light
Heiko Müller, Anastasia Kazakova, Martin Pielot, Wilko Heuten and Susanne Boll

(L) Public Information System Interface Design Research
Ning Zhang, Junliang Chen, Zhengjie Liu and Jun Zhang

(L) Novel Modalities for Bimanual Scrolling on Tablet Devices
Ross McLachlan and Stephen Brewster

Text comprehensibility
Time: 15:30 – 17:00
Venue: Room 1.63
Session Chair: Monique Noirhomme (France)

(L) Frequent Words Improve Readability and Short Words Improve Understandability for People with Dyslexia
Luz Rello, Ricardo Baeza-Yates, Laura Dempere-Marco and Horacio Saggion

(S) TicQR: Flexible, Lightweight Linking of Paper and Digital Content using Mobile Phones
Jennifer Pearson, Simon Robinson, George Buchanan and Matt Jones

(S) Evaluating the Effect of Phrase Set in Hindi Text Entry
Mohit Jain, Khushboo Tekchandani and Khai N. Truong

17:00 – 18:30

Business Meeting: WG 13.3 - Human-Computer Interaction and Disability
Time: 17:00
Venue: Room 1.64
IFIP WG 13.3 Chair: Gerhard Weber

Conference Reception
Time: 19:00
Venue: Two Oceans Aquarium

THURSDAY 5 SEPTEMBER 2013

08:00 – 8:55: Registration Welcome Refreshments
Venue: Jasminum and Strelitzia Conservatories

Day Schedule

- Plenary Session : 09:00 – 10:00
- Interactive Posters and Mid-morning Refreshments: 10:00 – 11:00
- Parallel Sessions: 11:00 – 12:30
- Lunch: 12:30 – 13:30
- Parallel Sessions: 13:30 – 15:00
- Mid-afternoon Refreshments: 15:00 – 15:30
- Parallel Sessions: 15:30 – 17:00
- 17:00 – 18:30: IFIP TC 13 Working Group and other business meetings
- 19:00 – 21: 30: Conference Reception

9:00 – 10:00: Plenary Session
Venue: Auditorium 2

9:00 – 10:00: Keynote Address: *Yvonne Rogers*
Session Chair: Janet Wesson (South Africa)

Topic: Mindful or Mindless Technology?
We are increasingly living in our digital bubbles. Even when physically together – as families and friends in our living rooms, outdoors and public places - we have our eyes glued to our own phones, tablets and laptops. The new generation of 'all about me' health and fitness gadgets, that is becoming more mainstream, is making it worse. Do we really need smart shoes that tell us when we are being lazy and glasses that tell us what we can and cannot eat? Is this what we want from technology – ever more forms of digital narcissism, virtual nagging and data addiction? In contrast, I argue for a radical rethink of our relationship with future digital technologies. One that inspires us, through shared devices, tools and data, to be more creative, playful and thoughtful of each other and our surrounding environments.

About Yvonne Rogers: Yvonne Rogers is the director of the Interaction Centre at UCL and a professor of Interaction Design. She is internationally renowned for her work in HCI and ubiquitous computing. She has been awarded a prestigious EPSRC dream fellowship to rethink the relationship between ageing, computing and creativity. She is known for her visionary research agenda of user engagement in ubiquitous computing and has pioneered an approach to innovation and ubiquitous learning. Her current research focuses on behavioural change, through augmenting everyday, learning and collaborative work activities with interactive technologies. She has published over 200 articles, a new book on HCI Theory (2012) and is a co-author of the definitive textbook on Interaction Design and HCI now in its 3rd edition that has sold over 150,000 copies worldwide. She is also a Fellow of the British Computer Society and the ACM's CHI Academy.

10:00 – 11:00 : Interactive Poster Session and Mid-morning Refreshments
Venue: Jasminum and Strelitzia Conservatories

Interactive Posters	
Adding Vibrotactile Feedback to Large Interactive Surfaces *Julian Seifert, Markus Packeiser and Enrico Rukzio*	Supporting Improved Maternity Care by Midwives: design opportunities & lessons learned *Abdullah Al Mahmud and David Keyson*
Analysis and Visualization of Interactions with Mobile Web Applications *Paolo Burzacca and Fabio Paternò*	Technology Enhanced PBL in HCI Education: a Case Study *Christina Vasiliou, Andri Ioannou and Panayiotis Zaphiris*
Beats Down: Using Heart Rate for Game Interaction in Mobile Settings *Claudia Stockhausen, Justine Smyzek and Detlef Krömker*	The 'Relay Ideation' Technique: moving from problem understanding to problem solving in the design process *Karin Slegers, Pieter Duysburgh and An Jacobs*
Cultural Congruence and Rating Scale Biases in Homepages *Gitte Lindgaard, Cathy Dudek and Gerry Chan*	The Effect of Stress on Cognitive Load Measurement *Dan Conway, Ian Dick, Zhidong Li, Yang Wang and Fang Chen*
Diverse Ecologies – Interdisciplinary Development for Cultural Education *Michael Heidt, Kalja Kanellopoulos, Linda Pfeiffer and Paul Rosenthal*	The PEW Framework for Worth Mapping *Fatoumata Camara, Gaëlle Calvary and Rachel Demumieux*
Evaluation of PhonAge: an adapted smartphone interface for elderly people *Farah Arab, Yasir Malik and Bessam Abdulrazak*	The Profile of Law Clerks Using Judiciary Informatics in Turkey *Zerrin Sungur, Özlem Alpu, Özlem Oktal and Berna Yazıcı*
Experimentally Manipulating Positive User Experience Based on the Fulfilment of User Needs *Andreas Sonnleitner, Marvin Pawlowski, Timm Kässer and Matthias Peissner*	Towards a Communication System for People with Athetoid Cerebral Palsy Yohan guerrier, Christophe Kolski and Franck Poirier
Floffy: designing an outdoor robot for children *Omar Mubin, Luke Vink, Pieter Oosterwijk, Abdullah Al Mahmud and Suleman Shahid*	Towards Supporting the Existing Workplace Practices of a Community of Brazilian Healthcare Professionals *Roberto Calderon, Sidney Fels and Junia Anacleto*
Human-Spreadsheet Interaction *Andrea Kohlhase*	Traveller: an interactive cultural training system controlled by user-defined body gestures *Felix Kistler, Elisabeth André, Samuel Mascarenhas, André Silva, Ana Paiva, Nick Degens, Gert Jan Hofstede, Eva Krumhuber, Arvid Kappas and Ruth Aylett*
Improving Students Learning Programming Skills with ProGames - programming through games system *Raquel Hijón-Neira, Ángel Velázquez-Iturbide, Celeste Pizarro-Romeroand, Luís Carriço*	Usability Guidelines for Mobile Devices: length of hyperlinks *Eva Garcia-Lopez, Antonio Garcia-Cabot, Luis de-Marcos and Jose-Ramon Hilera*
Long-Term Experiences with an Iterative Design of a QR-Code-Based Payment System for Beverages *Max-Emanuel Maurer, Alexander De Luca, Alina Hang, Doris Hausen, Fabian Hennecke, Sebastian Loehmann, Henri Palleis, Hendrik Richter, Simon Stusak, Aurélien Tabard, Sarah Tausch, Emanuel von Zezschwitz, Franziska Schwamb, Heinrich Hussmann and Andreas Butz*	User-Centered Design between Cultures: designing for and with Immigrants *Jan Bobeth, Stephanie Schreitter, Susanne Schmehl, Stephanie Deutsch and Manfred Tscheligi*

Moment Machine: opportunities and challenges of posting situated snapshots onto networked public displays *Nemanja Memarovic, Ava Fatah gen Schieck, Efstathia Kostopoulou, Moritz Behrens and Martin Traunmueller*	Using Graphical Representations to Support the Calculation of Infusion Parameters *Sandy J. J. Gould, Anna L. Cox and Duncan P. Brumby*
Overview Scrollbar: a scrollbar showing an entire document as an overview *Ko Mizoguchi, Daisuke Sakamoto and Takeo Igarashi*	Visual Conversational Interfaces to Empower Low-literacy Users *Sheetal Agarwal, Jyoti Grover, Meghna Singh, Arun Kumar, Monia Puri and Christian Remy*
Participatory Design for Cultural Representation: a cultural transparency perspective *Amalia Sabiescu and Nemanja Memarovic*	Visual Indication While Sharing Items from a Private 3D Portal Room UI to Public Virtual Environments *Minna Pakanen, Leena Arhippainen, Jukka H. Vatjus-Anttila and Olli-Pekka Pakanen*
Reducing Driver Task Load and Promoting Sociability through an Affective Intelligent Driving Agent (AIDA) *Kenton Williams and Cynthia Breazeal*	Web Design for Science Museum towards engaging user experience *Mohd Syaheezam Asyraq Yamin and Eswati Azni Jaafar*
Semantic Modelling in Support of Adaptive Multimodal Interface Design *Elena Tsiporkova, Anna Hristoskova, Tom Tourwé and Tom Stevens*	Workshop Posters Doctoral Consortium Posters African Masters Consortium Posters

11:00 – 12:30: Parallel Sessions

Special Interest group
Time: 11:00 – 12:30
Venue: Auditorium 2
Session Chair: David Lamas (Estonia)

Promoting Human-Computer Interaction Values and Practices in Small and Emerging Economies
David Lamas, Panayiotis Zaphiris, Georgios Christou and Alfredo Terzoli

Mobile phone applications
Time: 11:00 – 12:30
Venue: Room 1.41
Session Chair: Judy van Biljon (South Africa)

(L) Communicating in a Ubicomp World: interaction rules for guiding design of mobile interfaces
S. Shyam Sundar, Xue Dou and Sangmee Lee

(S) Using Video Prototypes for Evaluating Design Concepts with Users: a comparison to usability testing
Matthijs Zwinderman, Rinze Leenheer, Azadeh Shirzad, Nikolay Chupriyanov, Glenn Veugen, Biyong Zhang and Panos Markopoulos

(S) Flow Specification Patterns of End-User Programmers: lessons learnt from a health mobile application authoring environment design
Filipe Fernandes, Luís Duarte and Luís Carriço

(S) MoCoShoP: supporting mobile and collaborative shopping and planning of interiors
Julian Seifert, Dennis Schneider and Enrico Rukzio

(S) Usability and Utility Needs of Mobile Applications for Business Management among MSEs: A case of Myshop in Uganda
Rehema Baguma, Marko Myllyluoma; Nancy Mwakaba, Bridget Nakajubi

Learning and knowledge-sharing
Time: 11:00 – 12:30
Venue: Room 1.42
Session Chair: Jan Gulliksen (Sweden)

(L) Usability Specialists as Boundary Spanners – an Appraisal of Usability Specialists' Work in Multiparty Distributed Open Source Software Development Effort
Netta Iivari

(L) Introducing New Perspectives in the Use of Social Technologies in Learning: social constructionism
Antigoni Parmaxi, Panayiotis Zaphiris, Eleni Michailidou, Salomi Papadima-Sophocleous and Andri Ioannou

(S) Vimprint: exploring alternative learning through low-end mobiles
Sheetal K. Agarwal, Jyoti Grover, Anupam Jain and Arun Kumar

(S) Informing the Design of an Authoring Tool for Developing Social Stories
Aurora Constantin, Helen Pain and Annalu Waller

Cross-cultural, intercultural and social issues
Time: 11:00 – 12:30
Venue: Room 1.43
Session Chair: Jose Abdelnour-Nocera (UK)

(L) Your Phone has Internet - why are you at a library PC? Re-imagining public access in the mobile internet era
Jonathan Donner and Marion Walton

(S) Considering Communities, Diversity and the Production of Locality in the Design of Networked Urban Screens
Wallis Motta, Ava Fatah gen Schieck, Holger Schnädelbach, Efstathia Kostopoulou Kostopoulou, Moritz Behrens, Steve North and Lei Ye

(S) Web Accessibility in Africa: a Study of Three African Domains
Daniel Costa, Nádia Fernandes, Sofia Neves, Carlos Duarte, Raquel Hijón-Neira and Luís Carriço

(S) Growing Existing Aboriginal Designs to Guide a Cross-Cultural Design Project
Margot Brereton, Paul Roe, Thomas Amagula, Serena Bara, Judy Lalara and Anita Lee Hong

UX in work / educational contexts
Time: 11:00 – 12:30
Venue: Room 1.44
Session Chair: Darelle van Greunen (South Africa)

(L) Finger on the Pulse: the value of the activity stream in the enterprise
Ido Guy, Tal Steier, Maya Barnea, Inbal Ronen and Tal Daniel

(L) Relationship-based business process crowdsourcing?
Jacki O'Neill and David Martin

(S) User Experience and Learning Experience in Online HCI Courses"
Saila Ovaska

Tabletop computing
Time: 11:00 – 12:30
Venue: Room 1.61
Session Chair: Andrew Smith (South Africa)

(L) Dynamic Tangible User Interface Palettes
Martin Spindler, Victor Cheung and Raimund Dachselt

(L) TIDE: Lightweight Device Composition for Enhancing Tabletop Environments with Smartphone Applications
Léo Sicard, Aurélien Tabard, Juan David Hincapié-Ramos and Jakob E. Bardram

(L) Dynamic Spatial Positioning: Physical Collaboration around Interactive Table by Children in India
Izdihar Jamil, Kenton O'Hara, Mark Perry, Abhijit Karnik, Mark T Marshall, Swathi Jha, Sanjay Gupta and Sriram Subramanian

3D navigation
Time: 11:00 – 12:30
Venue: Room 1.62
Session Chair: Nuno Nunes (Portugal)

(L) Assessing the Impact of Automatic Vs. Controlled Rotations on Spatial Transfer with a Joystick and a Walking Interface in VR
Florian Larrue, Hélène Sauzéon, Déborah Foloppe, Grégory Wallet, Jean-René Cazalets, Christian Gross, Martin Hachet and Bernard N'Kaoua

(L) Designing Intuitive Multi-touch 3D Navigation Techniques
Damien Marchal, Clément Moerman, Géry Casiez and Nicolas Roussel

(L) Truly Useful 3D Drawing System for Professional Designer by "Life-sized and Operable" Feature and New Interaction
Shun'ichi Tano, Shinya Yamamoto, Junko Ichino, Tomonori Hashiyama and Mitsuru Iwata

Social collaborative interaction
Time: 11:00 – 12:30
Venue: Room 1.63
Session Chair: Toni Robertson (Australia)
(L) Paraplay: exploring playfulness around physical console gaming
John Downs, Frank Vetere and Steve Howard

(S) A Tale of Two Puppets, Two Avatars and Two Countries
Yoram I. Chisik , Monchu Chen and M. Clara Corriea Martins

(S) Likeness and Dealbreakers: interpreting interpersonal compatibility from online music profiles
Mo Kudeki and Karrie Karahalios
(S) Avalanche! Reanimating Multiple Roles in Child Computer Interaction Design
Timo Göttel

Cognitive workload
Time: 11:00 – 12:30
Venue: Room 1.64
Session Chair: Stacy Hobson (USA)
(L) Information Holodeck: thinking in technology ecologies
Sharon Lynn Chu and Francis Quek

(L) Mobility Matters: identifying cognitive demands that are sensitive to orientation
G. Michael Poor, Guy Zimmerman, Dale S. Klopfer, Samuel D. Jaffee , Laura Marie Leventhal and Julie Barnes

(S) Managing Personal Information across Multiple Devices: Challenges and Opportunities
Simone Beets and Janet Wesson

(S) GSR and Blink Features for Cognitive Load Classification
Nargess Nourbakhsh, Yang Wang and Fang Chen

12:30 – 13:30: Lunch
Venue: Jasminum and Strelitzia Conservatories

13:30 – 15:00: Parallel Sessions

Panel
Time: 13:30 – 15:00
Venue: Auditorium 2
Session Chair: Jose Abdelnour-Nocera (UK)
Seeing 'the obvious' as Subject and Object of Cross-cultural HCI Design
Jose Abdelnour-Nocera, Heike Winschiers, Torkil Clemmensen and Christian Sturm

E-input/output devices (e-readers, whiteboards)
Time: 13:30 – 15:00
Venue: Room 1.41
Session Chair: Gitte Lindgaard (Autralia)
(L) The Mysterious Whiteboard
Clemens N. Klokmose and Olav W. Bertelsen

(L) Reading Together as a Leisure Activity: implications for e-reading
Michael Massimi, Rachelle Campigotto, Abbas Attarwala and Ronald M. Baecke

(L) Leisure-Based Reading and The Place of E-Books in Everyday Life
Annika Hupfeld, Abigail Sellen, Kenton O'Hara and Tom Rodden

Learning tools, learning contexts
Time: 13:30 – 15:00
Venue: Room 1.42
Session Chair: Saila Ovaska (Finland)

(L) Improving Evaluation Honesty and User Experience in e-learning by Increasing Evaluation Cost and Social Presence
Juha Leino and Tomi Heimonen

(L) The ReflecTable: bridging the gap between theory and practice in design education
Jonathan Hook, Thomas Hjermitslev, Ole Sejer Iversen and Patrick Olivier

(S) Interacting with Augmented Reality: how does location-based AR enhance learning?
Ruobing Li, Bo Zhang, S. Shyam Sundar and Henry Been-Lim Duh

Interface layout and data entry
Time: 13:30 – 15:00
Venue: Room 1.43
Session Chair: Anirudha Joshi (India)

(L) Evaluating Direct Manipulation Operations for Constraint-Based Layout
Clemens Zeidler, Christof Lutteroth, Wolfgang Stuerzlinger and Gerald Weber

(S) KLM Form Analyzer: automated evaluation of web form filling tasks using human performance models
Christos Katsanos, Nikos Karousos, Nikolaos Tselios, Michalis Xenos and Nikolaos Avouris

(S) The Evolution of Number Entry: a case study of the telephone
Parisa Eslambolchilar, Julie Webster and Gerrit Niezen

(S) A User Study with GUIs Tailored for Smartphones
David Raneburger, David Alonso-Ríos, Roman Popp, Hermann Kaindl and Jürgen Falb

(S) A Comparison of List vs. Hierarchical UIs on Mobile Phones for Non-Literate Users
Indrani Medhi, Kentaro Toyama, Anirudha Joshi, Uday Athavankar and Edward Cutrell

Sustainability
Time: 13:30 – 15:00
Venue: Room 1.44
Session Chair: Valentina Nisi (Portugal)

(L) Exploring Reactions to Widespread Energy Monitoring
James A. Colley, Benjamin Bedwell, Andy Crabtree and Tom Rodden

(S) HCI for City Farms: design challenges & opportunities
Peter Lyle, Jaz Hee-jeong Choi and Marcus Foth

(S) Towards Engaged Consumption: new sources of inspiration for eco-feedback design
Stephen Snow and Margot Brereton

(S) WattsBurning on my mailbox: a tangible art inspired eco-feedback visualization for sharing energy consumption
Filipe Quintal, Mary Barreto, Nuno Nunes, Valentina Nisi and Lucas Pereira

(S) Sustainability at Home: an exploratory study on monitoring needs and energy management actions of solar power producers
Dounia Lahoual and Myriam Fréjus

Health / medical devices
Time: 13:30 – 15:00
Venue: Room 1.61
Session Chair: Funmi Adebesin (South Africa)

(L) Increasing Accuracy by Decreasing Presentation Quality in Transcription Tasks
Frank Soboczenski, Paul Cairns and Anna Cox

(S) Adoption and Appropriation: a design process from HCI research at a Brazilian neurological hospital
Junia Anacleto and Sidney Fels

(S) You Can't Touch This: potential perils of patient interaction with clinical medical devices
Paul Noble and Ann Blandford

(S) Development of Novel eHealth Services for Citizen Use – Current System Engineering vs. Best Practice in HCI
Isabella Scandurra, Jesper Holgersson, Thomas Lind and Gunilla Myreteg

(S) Chronicles: Supporting conversational narrative in alternative and augmentative communication
Annalu Waller, Rachel Menzies, Daniel Herron, Suzanne Prior, Rolf Black and Thilo Kroll

Model-based user interface design
Time: 13:30 – 15:00
Venue: Room 1.62
Session Chair: Julio Abascal (Spain)

(L) Model Assisted Creativity Sessions for the Design of Mixed Interactive Systems: a protocol analysis
Christophe Bortolaso and Emmanuel Dubois

(L) Conception of Ambiguous Mapping and Transformation Models
Christopher Martin, Matthias Freund, Henning Hager and Annerose Braune

(L) Model-Based Self-Explanatory UIs for Free, but Are They Valuable?
Alfonso García Frey, Gaëlle Calvary, Sophie Dupuy-Chessa and Nadine Mandran

Social behaviour, collaboration and presence
Time: 13:30 – 15:00
Venue: Room 1.63
Session Chair: S. Shyam Sundar (USA)

(L) Social Network Users' Religiosity and the Design of Post Mortem Aspects
Cristiano Maciel and Vinicius Carvalho Pereira

(S) Social Influence from Personalized Recommendations to Trusting Beliefs of Websites: Intermediate Role of Social Presence
Yanan Li and Yong Wang

(S) Perceptions of Facebook Privacy and Career Impression Management
Danielle Pilcer and Andrew Thatcher

(S) An Experimental Study of Chinese Shopping Related Sharing Behaviors
Min Li, Jun Zhang, Zhengjie Liu and Graham Johnson

(S) Simplifying Remote Collaboration Through Spatial Mirroring
Fabian Hennecke, Simon Voelker, Maximilian Schenk, Hauke Schaper, Jan Borchers and Andreas Butz

Designing for inclusiveness I
Time: 13:30 – 15:00
Venue: Room 1.64
Session Chair: Gerhard Weber (Germany)

(L) Lessons Learned from Crowd Accessibility Services
Hironobu Takagi, Susumu Harada, Daisuke Sato and Chieko Asakawa

(L) Accessibility of Public Web Services: A Distant Dream?
Kristiina Nurmela, Antti Pirhonen and Airi Salminen

(L) Augmenting Accessibility Guidelines with User Ability Rationales
Christophe Ponsard, Pascal Beaujeant and Jean Vanderdonckt

15:00 – 15:30: Mid-afternoon refreshments
Venue: Jasminum and Strelitzia Conservatories

15:30 – 17:00: Parallel Sessions

Human-work interaction design
Time: 15:30 – 17:00
Venue: Room 1.41
Session Chair: Tom Gross (Germany)

(L) Do Usability Professionals Think about User Experience in the Same Way as Users and Developers Do?
Torkil Clemmensen, Morten Hertzum, Jiaoyan Yang and Yanan Chen

(L) Here or There?: how configuration of transnational teams impacts Social capital
Julia Haines, Judith Olson and Gary Olson

(L) Computer-Supported Work in Partially Distributed and Co-Located Teams: the influence of mood feedback
Andreas Sonderegger, Denis Lalanne, Luisa Bergholz, Fabien Ringeval and Juergen Sauer

Diversity / ICT in social development
Time: 15:30 – 17:00
Venue: Room 1.42
Session Chair: Zhengjie Lui (China)

(L) Availability4D: refining the link between availability and adoption in marginalised communities
Fritz Meissner and Edwin Blake

(S) Designing a Platform for Participatory Urbanism: Transforming Dialogue into Action in Underserved Communities
Leonardo Giusti , Amelia Schladow, Amar Boghani, Steve Pomeroy, Nicholas Wallen and Federico Casalegno

(S) A Scandinavian Approach to Designing with Children in a Developing Country - Exploring the Applicability of Participatory Methods
Nahid Wakil and Peter Dalsgaard

(S) Communication Choices to Engage Participation of Rural Indonesian Craftspeople in Development Projects
Ellya Zulaikha and Margot Brereton

(S) Content Prototyping – An Approach for Engaging Non-Technical Users in Participatory Design
Maletsabisa Molapo and Gary Marsden

Physical ergonomics
Time: 15:30 – 17:00
Venue: Room 1.43
Session Chair: Gary Marsden (South Africa)

(L) Modeless Pointing with Low-Precision Wrist Movements
Theophanis Tsandilas, Emmanuel Dubois and Mathieu Raynal

(L) Exploring the Use of Distributed Multiple Monitors Within an Activity-Promoting Sit-and-Stand Office Workspace
Kathrin Probst, David Lindlbauer, Florian Perteneder, Michael Haller, Bernhard Schwartz and Andreas Schrempf

(S) Wands are Magic: a comparison of devices used in 3D pointing interfaces
Martin Henschke, Tom Gedeon, Richard Jones, Sabrina Caldwell and Dingyun Zhu

Data entry mechanisms and devices
Time: 15:30 – 17:00
Venue: Room 1.44
Session Chair: Jan Gulliksen (Sweden)

(L) Predictive Input Interface of Mathematical Formulas
Yoshinori Hijikata, Keisuke Horie and Shogo Nishida

(L) A Performance Review of Number Entry Interfaces
Patrick Oladimeji, Harold Thimbleby and Anna Cox

(L) Selection-Based Mid-Air Text Entry on Large Displays
Anders Markussen, Mikkel R. Jakobsen and Kasper Hornbæk

Narratives in design
Time: 15:30 – 17:00
Venue: Room 1.61
Session Chair: Hermann Kaindl (Austria)

(L) Using Narrative Research and Portraiture to Inform Design Research
Connie Golsteijn and Serena Wright

(L) Storytelling in Visual Analytics tools for Business Intelligence
Micheline Elias, Marie-Aude Aufaure and Anastasia Bezerianos

(L) Beyond Rhetoric to Poetics in IT Invention
Annie Gentes and Ted Selker

Social media
Time: 15:30 – 17:00
Venue: Room 1.62
Session Chair: Henry Duh (Australia)

(L) Who Would Pay for Facebook? Self esteem as a predictor of user behavior, identity construction and valuation of virtual possessions
Jiaqi Nie and S. Shyam Sundar

(L) Helping Me Helping You: Designing to Influence Health Behaviour Through Social Connections
Noreen Kamal, Sidney Fels, Joanna McGrenere and Kara Nance

(S) Exploring Twitter Interactions through Visualization Techniques:
users impressions and new possibilities
Guilherme Coletto Rotta, Vinícius Silva de Lemos, Ana Luiza Moura da Cunha, Isabel Harb Manssour, Milene Selbach Silveira and André Fagundes Pase

Gaze-enabled interaction design
Time: 15:30 – 17:00
Venue: Room 1.63
Session Chair: Kari-Jouko Räihä (Finland)

(L) Eyes Only: navigating hypertext with gaze
Abdul Moiz Penkar, Christof Lutteroth and Gerald Weber

(L) Eye Pull, Eye Push: moving objects between large screens and personal devices with gaze & touch
Jayson Turner, Jason Alexander, Andreas Bulling, Dominik Schmidt and Hans Gellersen

(L) Tools for a Gaze-controlled Drawing Application – Comparing Gaze Gestures against Dwell Buttons
Henna Heikkilä

17:00 – 18:00

Meeting: INTERACT 2015 Organization Committee
Time: 17:00
Venue: Room 1.41
Chairs: Tom Gross and Julio Abascal

18:30 – 22:30

Conference Dinner
Time: 18:30
Venue: Clock Tower Pavillion

FRIDAY 6 SEPTEMBER 2013

08:30 − 8:55: Registration and Welcome Refreshments
Venue: Jasminum and Strelitzia Conservatories

Day Schedule

- Parallel Sessions: 09:00 − 10:30
- Mid-morning Refreshments: 10:30 − 11:00
- Parallel Sessions: 11:00 − 12:30
- Lunch: 12:30 − 13:30
- Plenary Session: 13:30 − 15:30
- Closing Reception: 15:30 − 16: 30

9:00 − 10:30: Parallel Session

Panel
Time: 09:00− 10:30
Venue: Auditorium 2
Session Chair: Darelle van Greunen (South Africa)

Community Collaboration
Anicia Peters, Darelle van Greunen, Gereon Koch Kapuire, Anupama Saxena, Dan Orwa, Bongiwe Dlutu-Siya and Nicola J. Bidwell

Mobile UX and privacy concerns
Time: 09:00− 10:30
Venue: Room 1.41
Session Chair: Janet Wesson (South Africa)

(L) The Impact of Encumbrance on Mobile Interactions
Alexander Ng, Stephen A. Brewster and John Williamson

(L) Nudging People Away From Privacy-Invasive Mobile Apps Through Visual Framing
Eun Kyoung Choe, Jaeyeon Jung, Bongshin Lee and Kristie Fisher

(L) A Field Trial on Mobile Crowdsourcing of News Content: Factors Influencing Participation
Heli Väätäjä, Esa Sirkkunen and Mari Ahvenainen

Supporting shared activities
Time: 09:00− 10:30
Venue: Room 1.42
Session Chair: Gerrit van der Veer (The Netherlands)

(L) F-formations in Cooking Together: a digital ethnography using YouTube
Jeni Paay, Jesper Kjeldskov, Mikael Skov and Kenton O'Hara

(L) Sharing Experiences over Video: watching video programs together at a distance
Anna Macaranas, Gina Venolia, Kori Inkpen and John Tang

(L) Practices Surrounding Event Photos
Dhaval Vyas, Anton Nijholt and Gerrit van der Veer

3D technologies - 3D object manipulation
Time: 09:00− 10:30
Venue: Room 1.43
Session Chair: Edwin Blake (South Africa)

(L) RelicPad: A hands-on, mobile approach to collaborative exploration of virtual museum artifacts
Steven Neale, Winyu Chinthammit, Christopher Lueg and Paddy Nixon

(L) A One-Handed Multi-Touch Method for 3D Rotations
Doug Scheurich and Wolfgang Stuerzlinger

(S) HandsIn3D: Supporting remote guidance with immersive virtual environments
Weidong Huang, Leila Alem and Franco Tecchia

(S) MotionBender: A gesture-based interaction technique for editing motion paths
Frederic Raber, Quan Nguyen and Michael Kipp

Multimodal user interface design
Time: 09:00– 10:30
Venue: Room 1.44
Session Chair: Elise van den Hoven (Australia)

(L) Comparing Input Modalities for Peripheral Interaction: A Case Study on Peripheral Music Control
Doris Hausen, Hendrik Richter, Adalie Hemme and Andreas Butz

(L) When Paper Meets Multi-Touch: a study of multi-modal interactions in air traffic control
Cheryl Savery, Christophe Hurter, Rémi Lesbordes, Maxime Cordeil and T.C. Nicholas Graham

(L) Linetic: Technical, Usability and Aesthetic Implications of a Ferrofluid-based Organic User Interface
Jeffrey Tzu Kwan Valino Koh, Kasun Karunanayaka and Ryohei Nakatsu

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Designing for inclusiveness II
Time: 09:00– 10:30
Venue: Room 1.61
Session Chair: Julio Abascal (Spain)

(L) Designing for Different Users and Multiple Devices: a roadmap towards inclusive environments
Ig Ibert Bittencourt, Maria Cecília Baranauskas, Diego Dermeval, Juliana Braga and Roberto Pereira

(L) User Control in Adaptive User Interfaces for Accessibility
Matthias Peissner and Rob Edlin-White

(S) Vibro-Tactile Enrichment Improves Blind User Interaction with Mobile Touchscreens
Maria Claudia Buzzi, Marina Buzzi, Barbara Leporini and Maria Teresa Paratore

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Novel user interfaces
Time: 09:00– 10:30
Venue: Room 1.62
Session Chair: Gary Marsden (South Africa)

(L) A New Approach to Walking in Place
Luis Bruno, Joao Pereira and Joaquim Jorge

(L) Disambiguation Canvas: a precise selection technique for virtual environments
Henrique G. Debarba, Jerônimo G. Grandi, Anderson Maciel, Luciana Nedel and Ronan Boulic

(L) Full Semantic Transparency: overcoming boundaries of applications
Andrea Kohlhase, Michael Kohlhase, Constantin Jucovschi and Alex Toader

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Software Development
Time: 09:00– 10:30
Venue: Room 1.63
Session Chair: Judy van Biljon (South Africa)

(L) Existing but not Explicit - The User Perspective in Scrum Projects in Practice
Åsa Cajander, Marta Larusdottir and Jan Gulliksen

(L) Authoring Support for Post-WIMP Applications
Katharina Gerken, Sven Frechenhäuser, Ralf Dörner and Johannes Luderschmidt

(S) Fast Train to DT: a practical guide to coach design thinking in software industry
Visvapriya Sathiyam and Muktha Hiremath

10:30 - 11:00: Mid-morning refreshments
Venue: Jasminum and Strelitzia Conservatories

Panel
Time: 11:00– 12:30
Venue: Auditorium 2
Session Chair: Thomas Binder (Denmark)

What Can Design Laboratories Do?
Thomas Binder, Lone Malmborg, Per-Anders Hillgren, Jörn Messeter, Yanki Lee and Sibukele Gumbo

Mobile interaction design
Time: 11:00– 12:30
Venue: Room 1.41
Session Chair: Rehema Baguma (Uganda)

(L) Awareness, Transience and Temporality: design opportunities from Rah Island
Pedro Ferreira, Pedro Sanches and Alexandra Weilenmann

(S) Extending Mobile Interfaces with External Screens
Julian Seifert, Dennis Schneider and Enrico Rukzio

(S) Comparison of Phone-based Distal Pointing Techniques for Point-Select Tasks
Mohit Jain, Andy Cockburn and Sriganesh Madhvanath

Supporting physical activity
Time: 11:00– 12:30
Venue: Room 1.42
Session Chair: Paula Alexandra Silva (Portugal)

(L) Walking in the Wild – Using an Always-on Smartphone Application to Increase Physical Activity
Tim Harries, Parisa Eslambolchilar, Chris Stride, Ruth Rettie and Simon Walton

(L) The Development and Evaluation of an Interactive System for Age Related Musculoskeletal Rehabilitation in the Home
Mobolaji Ayoade, Stephen Uzor and Lynne Baillie

Managing the UX
Time: 11:00– 12:30
Venue: Room 1.43
Session Chair: Darelle van Greunen (South Africa)

(L) Managing User Experience – Managing Change
Job Mashapa, Edna Chelule, Darelle Van Greunen and Alida Veldsman

(L) What Do You See In The Cloud? Understanding the Cloud-Based User Experience through Practices
John C. Tang, Jed R. Brubaker and Catherine C. Marshall

(L) Evaluating User Experience for Interactive Television: Towards the Development of a Domain-Specific User Experience Questionnaire
Regina Bernhaupt and Michael Pirker

Creating effective 3D displays
Time: 11:00– 12:30
Venue: Room 1.44
Session Chair: Monique Noirhomme (Belgium)

(L) Touching the Void Revisited: analyses of touch behavior on and above tabletop surfaces
Gerd Bruder, Frank Steinicke and Wolfgang Stuerzlinger

(L) Understanding Hand Degrees of Freedom and Natural Gestures for 3D Interaction on Tabletop
Remi Brouet, Renaud Blanch and Marie-Paule

(L) Comparison of User Performance in Mixed 2D-3D Multi-Display Environments
Abhijit Karnik, Tovi Grossman and Sriram Subramanian

Facilitating social behaviour and collaboration II
Time: 11:00– 12:30
Venue: Room 1.61
Session Chair: Edward White (South Africa)

(L) PolemicTweet: video annotation and analysis through tagged tweets
Samuel Huron, Petra Isenberg and Jean Daniel Fekete

(L) OpinionBlocks: a crowd-powered, self-improving interactive visual analytic system for understanding opinion text
Mengdie Hu, Huahai Yang, Michelle X. Zhou, Liang Gou, Yunyao Li and Eben Haber

(L) BinCam: Designing for Engagement with Facebook for Behavior Change
Rob Comber, Anja Thieme, Ashur Rafiev, Nick Taylor, Nicole Krämer and Patrick Olivier

Voice / Sound-based computing Time: 11:00– 12:30 Venue: Room 1.62 Session Chair: Nicola Bidwell (South Africa)	**Humans and robots** Time: 11:00– 12:30 Venue: Room 1.63 Session Chair: Lars Oestreicher (Sweden)
(L) Supporting Voice Content Sharing among Underprivileged People in Urban India *Christian Remy, Sheetal Agarwal, Arun Kumar and Saurabh Srivastava* (L) "Roger that!" — The Value of Adding Social Feedback in Audio-mediated Communications *Rahul Rajan, Joey Hsiao, Deven Lahoti and Ted Selker* (S) Audvert: using spatial audio to gain a sense of place *Liam Betsworth, Nitendra Rajput, Saurabh Srivastava and Matt Jones* (S) Rhythms of the Domestic Soundscape: ethnomethodological soundwalks for phatic technology design *Hanif Baharin, Sean Rintel and Stephen Viller*	(L) A Dog Tail for Utility Robots: Exploring Affective Properties of Tail Movement *Ashish Singh and James E. Young* (L) Pebbles: User-Configurable Device Network for Robot Navigation *Kentaro Ishii, Haipeng Mi, Lei Ma, Natsuda Laokulrat, Masahiko Inami and Takeo Igarashi* (S) Robots for Real: developing a participatory design framework for implementing educational robots in real-world learning environments *Lykke Brogaard Bertel, Dorte Malig Rasmussen and Ellen Christiansen*

12:30 – 13:30: Lunch
Venue: Jasminum and Strelitzia Conservatories

13:30 – 15:30 Plenary Session
Venue: Auditorium 2

13:30 – 14:30: Keynote Address: *Johannes Cronje*
Session Chair: Paula Kotzé (South Africa)

Topic: Design 3.0
The Internet is in the process of entering its third generation - known as Web 3.0. Where the first web was static and the second interactive, the third is collaborative. But the collaboration is not just between people. It is between people and things. And things are getting smarter.

Which begs the question how does this affect the way we design?

This talk will consider the implications of Web 3.0 and the way in which we are beginning to work, and then ask what it does to our role as designers, but more specifically to our role as educators.

About Johannes Cronje:
Johannes Cronje is the Dean of the Faculty of Informatics and Design at the Cape Peninsula University of Technology. He started his career as a schoolmaster at Pretoria boys High School, then became a lecturer in communication at Pretoria Technikon, and later a professor of Computers in Education at the University of Pretoria. He holds two masters degrees and a doctorate from the University of Pretoria, and was visiting professor at universities in Norway, Finland, Sudan and Ethiopia. He has supervised more than 70 Masters and 38 doctoral students and has published more than 40 academic articles and chapters in books. He is married to Franci and they have three children and a dog.

14:30 – 15:30: Closing Ceremony
INTERACT 2013 Awards Ceremony
INTERACT 2015 Announcement
Session Chairs: Paula Kotzé and Janet Wesson (South Africa)

15:30 – 16:30: Farewell Reception
Venue: Jasminum and Strelitzia Conservatories

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IFIP TC13

Established in 1989, the International Federation for Information Processing Technical Committee on Human–Computer Interaction (IFIP TC13) is an international committee of 30 member national societies and 7 Working Groups, representing specialists in human factors, ergonomics, cognitive science, computer science, design and related disciplines. INTERACT is its flagship conference, staged biannually in different countries in the world.

IFIP TC13 aims to develop the science and technology of human–computer interaction (HCI) by encouraging empirical research, promoting the use of knowledge and methods from the human sciences in design and evaluation of computer systems; promoting better understanding of the relationship between formal design methods and system usability and acceptability; developing guidelines, models and methods by which designers may provide better human-oriented computer systems; and, cooperating with other groups, inside and outside IFIP, to promote user-orientation and humanization in system design. Thus, TC13 seeks to improve interactions between people and computers, encourage the growth of HCI research and disseminate these benefits worldwide.

The main orientation is toward users, especially the non-computer professional users, and how to improve human–computer relationships. Areas of study include: the problems that people have with computers; the impact on people in individual and organizational contexts; the determinants of utility, usability and acceptability; the appropriate allocation of tasks between computers and users; modelling the user to aid better system design; and harmonizing the computer to user characteristics and needs.

While the scope is thus wide, with a tendency toward general principles rather than particular systems, it is recognized that progress will only be achieved through both general studies to advance theoretical understanding and specific studies on practical issues (e.g. interface design standards, software system consistency, documentation, appropriateness of alternative communication media, human factors, guidelines for dialogue design, the problems of integrating multimedia systems to match system needs and organizational practices, etc.).

In 1999, TC13 initiated a special IFIP Award, the Brian Shackel Award, for the most outstanding contribution in the form of a refereed paper submitted to and delivered at each INTERACT. The award draws attention to the need for a comprehensive human-centered approach in the design and use of information technology in which the human and social implications have been taken into account. Since the process to decide the award takes place after papers are submitted for publication, the award is not identified in the proceedings.

IFIP TC13 stimulates working events and activities through its Working Groups (WGs) and Special Interest Groups (SIGs). WGs and SIGs consist of HCI experts from many countries, who seek to expand knowledge and find solutions to HCI issues and concerns within their domains, as outlined below.

- WG13.1 (Education in HCI and HCI Curricula) aims to improve HCI education at all levels of higher education, coordinate and unite efforts to develop HCI curricula and promote HCI teaching.
- WG13.2 (Methodology for User-Centered System Design) aims to foster research, dissemination of information and good practice in the methodical application of HCI to software engineering.
- WG13.3 (HCI and Disability) aims to make HCI designers aware of the needs of people with disabilities and encourage development of information systems and tools permitting adaptation of interfaces to specific users.
- WG13.4 (also WG2.7) (User Interface Engineering) investigates the nature, concepts and construction of user interfaces for software systems, using a framework for reasoning about interactive systems and an engineering model for developing user interfaces.
- WG13.5 (Human Error, Safety and System Development) seeks a framework for studying human factors relating to systems failure, develops leading edge techniques in hazard analysis and safety engineering of computer-based systems, and guides international accreditation activities for safety-critical systems.
- WG13.6 (Human-Work Interaction Design) aims at establishing relationships between extensive empirical work-domain studies and HCI design. It will promote the use of knowledge, concepts, methods and techniques that enable user studies to procure a better apprehension of the complex interplay between individual, social and organizational contexts and thereby a better understanding of how and why people work in the ways that they do.
- WG13.7 (Human–Computer Interaction and Visualization) is the newest of the working groups under the TC.13. It aims to establish a study and research program that will combine both scientific work and practical applications in the fields of Human–Computer Interaction and Visualization. It will integrate several additional aspects of further research areas, such as scientific visualization, data mining, information design, computer

graphics, cognition sciences, perception theory, or psychology, into this approach.

- SIG 13.1 (HCI and International Development) aims to promote the application of interaction design research, practice and education to address the needs, desires and aspirations of people in the developing world; support and develop the research, practice and education capabilities of HCI institutions and organizations based in the developing world; develop links between the HCI community in general, and IFIP TC13 in particular, with other relevant communities involved in Development, especially IFIP WG 9.4 Computers in Developing Countries.
- SIG 13.2 (Interaction Design and Children) aims to provide a forum for all things relating to interaction design and human computer interaction where the intended users or appropriators of the technology or service are children, including. The definition of children is broad rather than narrow; including toddlers and teenagers, but the core work, currently at least, is with children in junior schools.

New Working Groups and Special Interest Groups are formed as areas of significance to HCI arise. Further information is available at the IFIP TC13 website: http://www.tc13.org

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Paula Kotzé (South Africa) Gitte Lindgaard (Australia) Marco Winckler (France)	Simone Diniz Junqueira Barbosa (Brazil) Masaaki Kurosu (Japan)	Nikos Avouris (Greece) Zhengjie Liu (China)
Working Group Chairpersons		
WG13.1 (Education in HCI and HCI Curricula) Lars Oestreicher, Sweden **WG13.2 (Methodology for User-Centered System Design)** Peter Forbrig, Germany **WG13.3 (HCI and Disability)** Gerhard Weber, Germany	**WG13.4 (also 2.7) (User Interface Engineering)** Fabio Paternò, Italy **WG13.5 (Human Error, Safety, and System Development)** Chris Johnson, UK **WG13.6 (Human-Work Interaction Design)** Torkil Clemmensen, Denmark	**WG13.7 (Human Computer Interaction and Visualization)** Achim Ebert, Germany **SIG 13.1 – HCI and International Development** Andy Dearden, UK **SIG 13.2 – Interaction Design and Children** Janet Read, UK

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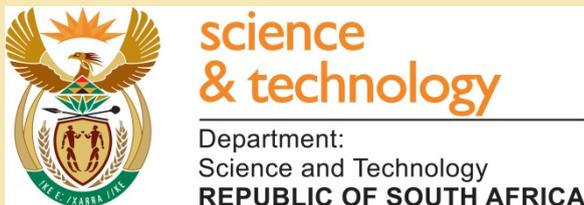
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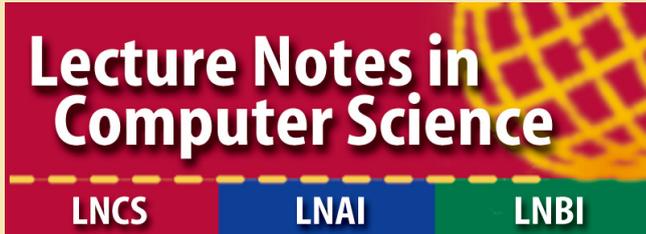
MAPS and DIRECTIONS

Cape Town International Convention Centre – Conference Main Venue

Physical Address:

Convention Square
1 Lower Long Street, off Walter Sisulu Avenue
(previously known as Coen Steytler Road)
Cape Town

(Opposite: View of CTICC Entrance at the
corner of Walter Sisulu Avenue and Lower Long
Street)

Driving Directions from Cape Town International Airport to CTICC (A on Map) (20.5 km, 20 minutes outside peak traffic):
1. From the Airport drive south on Airport Appraoch Road and follow the signs for Cape Town. Keep right.
2. Merge onto Setllers way / N2 via the ramp to Cape Town.
3. After 11.2 km merge into De Wall Drive /N2. Keep right (850m).
4. Continue onto Nelson Mandela Bloulevard for 5.0km. From here on on you will see signs for CTICC. Keep left.
5. Turn sharp left into Walter Sisulu Avenue at the traffic light.
6. The entrance to CTICC will be on your left at the next set of trafic lights (Long Street).
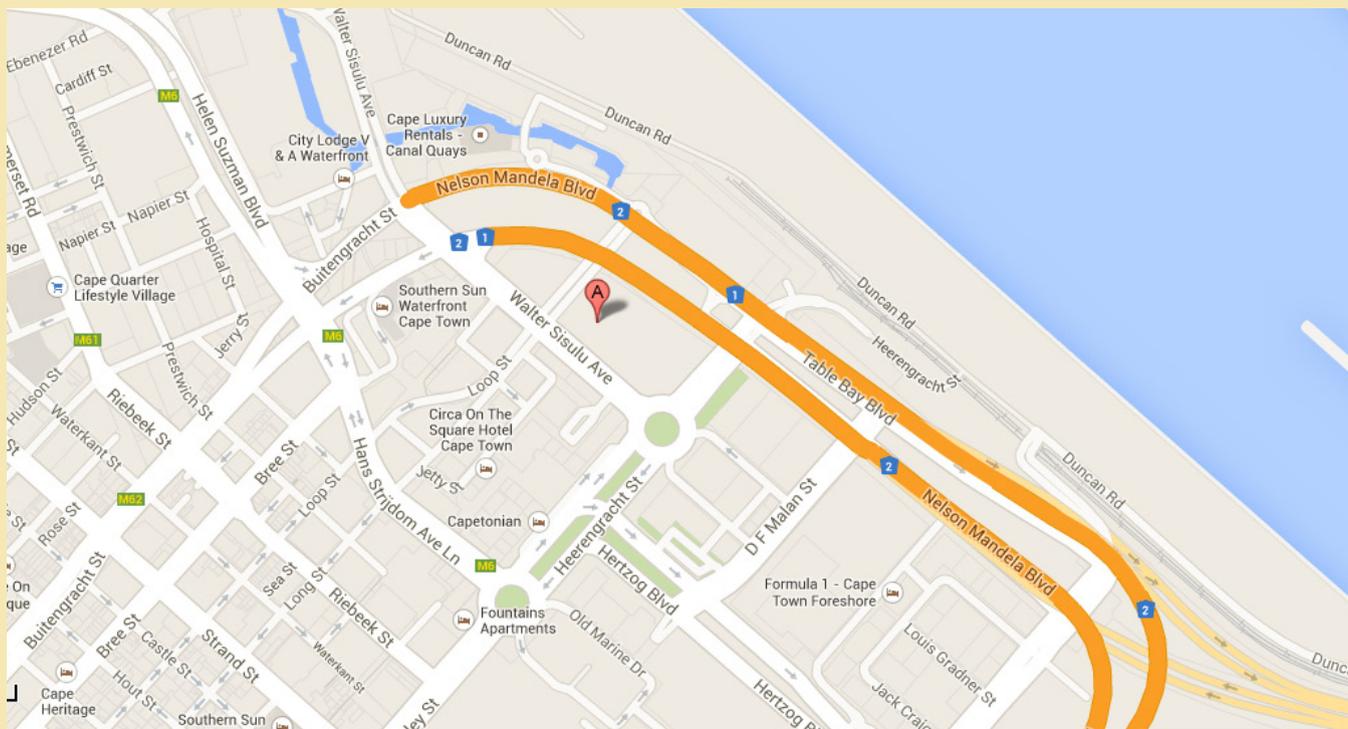
Two Oceans Aquarium – Conference Reception

**Physical address:**
Dock Road,
V&A Waterfront
Cape Town

Walking Directions from CTICC (A on Map) to Two Oceans Aquarium (B on Map) (1.5 KM, 20 – 25 Minutes)

1. At CTICC (Lower Long Street), cross Walter Sisulu Avenue at the traffic light. Turn right.
2. Head northwest on Walter Sisulu Avenue towards Buitengracht Street. At the Southern Sun Hotel (on the corner with Buitengracht Street), turn left toward the footbridge. Use the footbridge to cross the first lane of Buitengracht Street.
3. Cross the second lane of Buitengracht Street at the traffic light.
4. Continue on Walter Sisulu Avenue (about 300 m). Cross back over the road (Walter Sisulu Avenue) at the pedestrian crossing at the Audi motor dealer on your right hand side.
5. Continue on Walter Sisulu until the roundabout (a further 300 m).
6. At roundabout, take second exit onto West Quay Road.
7. Continue on West Quay Road. and cross 2 canals (650m).
8. After second canal, turn left and then right towards Dock Road. Turn left along Dock road (100m).
9. Continue towards Two Ocean Aquarium on your left (260 m)
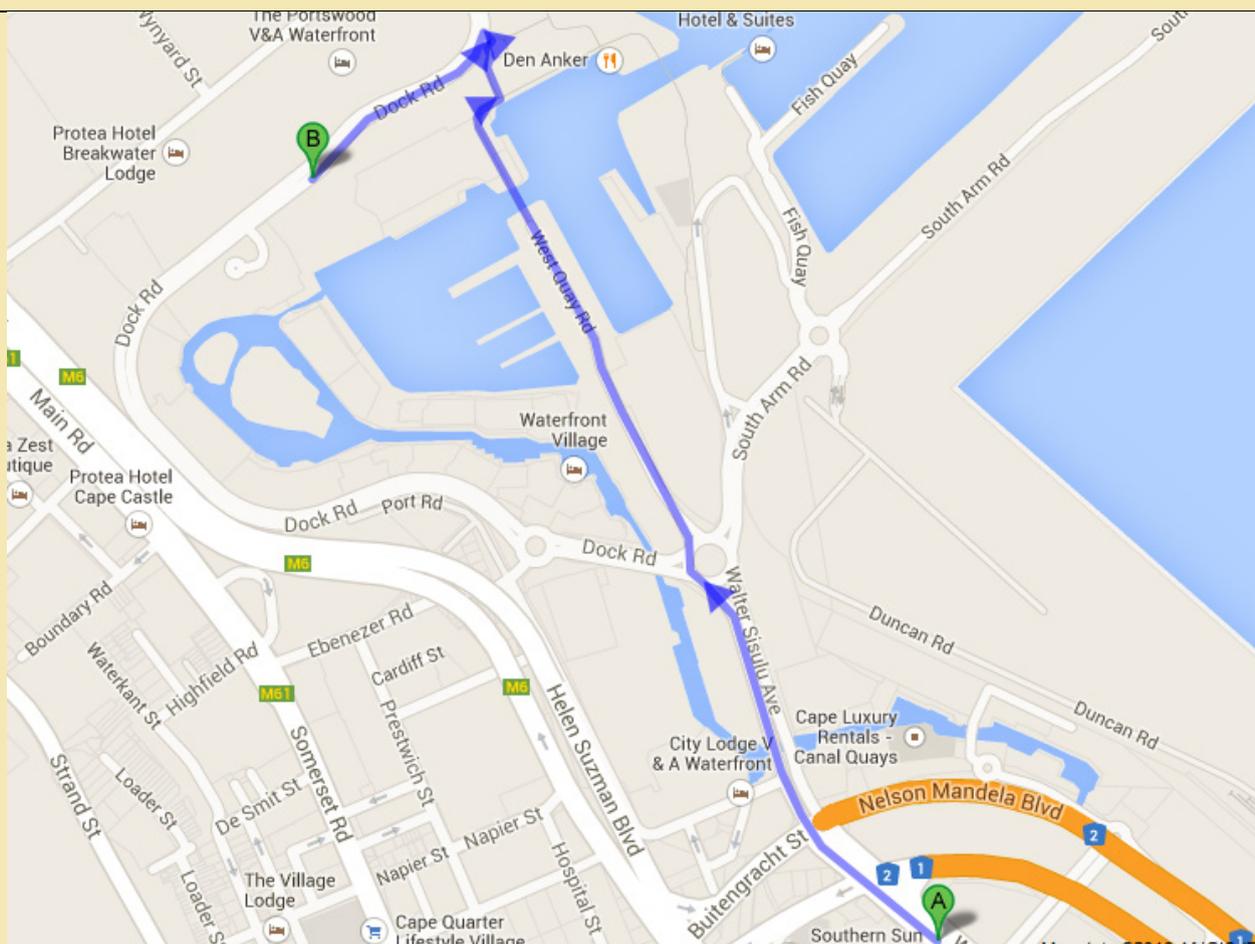
Driving Directions from CTICC (A on Map) to Two Oceans Aquarium (B on Map) (1.7km, 5 minutes):

1. Head northwest on Walter Sisulu Avenue towards Buitengracht Street
2. Cross Buitengracht Street (2 crossings)
3. Continue on Walter Sisulu Avenue until roundabout (600 m).
4. At roundabout, take first exit onto Doc Road Road.
5. Continue on Dock Road for 1.2 km towards Two Oceans Aquarium on your right.
6. Park in the Portswood parking garage on your left (across the road from the Tow oceans Aquarium).
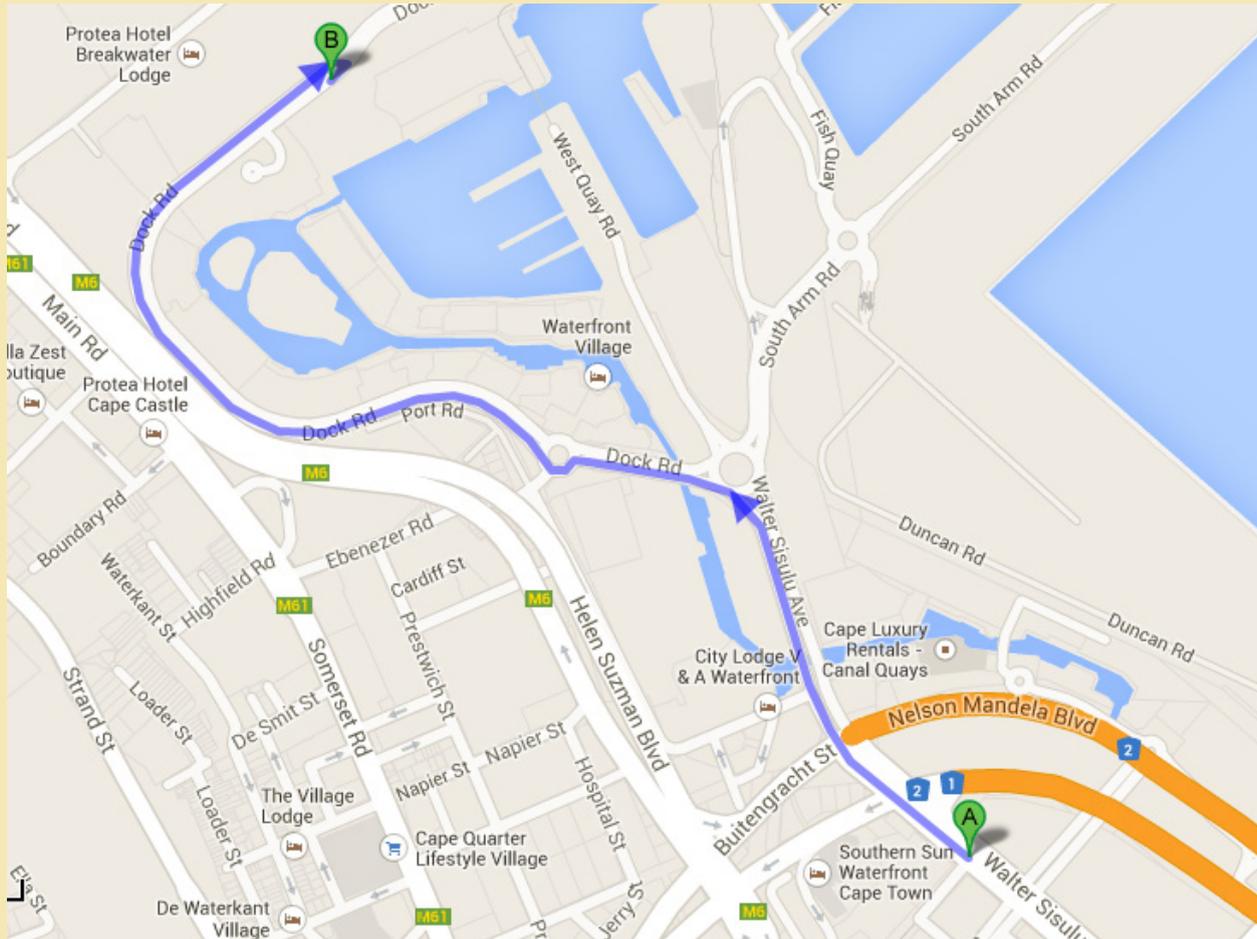
Clock Tower Pavilion – Conference Dinner

Physical Address:
The Pavilion Conference Centre
Clock Tower Centre
Off South Arm Road

Walking Directions from CTICC (A on Map) to Clock Tower Pavilion (B on Map) (1.1km, 15 – 20 minutes):
1. At CTICC (Lower Long Street), cross Walter Sisulu Avenue at the traffic light. Turn right.
2. Head northwest on Walter Sisulu Avenue towards Buitengracht Street. At the Southern Sun Hotel (on the corner with Buitengracht Street), turn left toward the footbridge. Use the footbridge to cross the first lane of Buitengracht Street.
3. Cross the second lane of Buitengracht Street at the traffic light.
4. Continue on Walter Sisulu Avenue (about 300 m). Cross back over the road (Walter Sisulu Avenue) at the pedestrian crossing at the Audi motor dealer on your right hand side.
5. Continue on Walter Sisulu until the roundabout (a further 300 m).
6. At roundabout, take third exit onto South Arm Road.
7. Continue for about 280m.
8. Keep left at first exit and continue for 300m.
9. The Clock Tower Centre will be on your right hand side.
10. Take 'Lifts to Shopping' to Level 2.
Follow signs for Clock Tower Pavilion/INTERACT 2013).

Driving Directions from CTICC (A on Map) to Clock Tower Pavilion (B on Map) (1.1km, 3 minutes):
1. Head northwest on Walter Sisulu Avenue towards Buitengracht Street
2. Cross Buitengracht Street (2 crossings)
3. Continue on Walter Sisulu Avenue until roundabout (600 m).
4. At roundabout, take third exit and onto South Arm Road.
5. Continue for about 280m.
6. Keep left at first exit and continue for about 250m.
7. Turn left to 'Silo Parking'. Take far right hand lane. Drive down the Ramp into 'Level 2 Public Parking.
8. Take 'Lifts to Shopping' to Level 2.
Follow signs for Clock Tower Pavilion/INTERACT 2013).

Map: CTICC to Clock Tower Pavilion