

CONFERENCE PROGRAM



25–29 September

INTERACT 2017 MUMBAI



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Welcome to INTERACT 2017

The 16th IFIP TC13 International Conference on Human-Computer Interaction, INTERACT 2017 Mumbai, is being held from September 25 to 29, 2017 in the beautiful campus of the Indian Institute of Technology, Bombay (IIT Bombay).

The theme of INTERACT 2017 is 'Global Thoughts, Local Designs'. The theme is designed to let HCI researchers respond to challenges emerging in the new age of global connectivity, where they often design products for users who are beyond their borders belonging to distinctly different cultures. As organizers of the conference, we are focusing our attention on four areas: India, developing countries, students, and research.

INTERACT 2017 made a conscious effort to lower barriers that prevent people from developing countries to participate in conferences. Thinkers and optimists believe that all regions of the world can achieve human development goals. Information and communication technologies (ICTs) can support this process and empower people to achieve their full potential. Today, ICT products have many new users and many new uses, but also present new challenges and provide new opportunities. It is no surprise that HCI researchers are showing great interest in these emergent users. INTERACT 2017 provides a platform to explore these challenges and opportunities, and also makes it easier for people from developing countries to participate. We have also introduced a new track called Field Trips which allows participants to directly engage with stakeholders within the context of a developing country.

Students represent the future of our community. They bring in new energy, enthusiasm and fresh ideas. But it is often hard for students to participate in international conferences. INTERACT 2017 made special efforts to bring students to the conference. The conference had low registration costs and several volunteering opportunities. Thanks to our sponsors, we could provide several travel grants. Most importantly, INTERACT 2017 has special tracks such as Installations, Student Design Consortium, and Student Research Consortium that give students the opportunities to showcase their work.

Finally, great research is the heart of a good conference. Like its predecessors, INTERACT 2017 aims to bring together high quality research. As a multidisciplinary field, HCI requires interaction and discussion among diverse people with different interests and backgrounds. The beginners and the experienced, theoreticians and

practitioners, and people from diverse disciplines and different countries gather together in Mumbai to learn from each other and to contribute to each other's growth. We thank all the authors who chose INTERACT 2017 as the venue to publish their research.

We received a total of 571 submissions distributed in 2 peer-reviewed tracks, 5 curated tracks, and 7 juried tracks. Of these, the following contributions were accepted:

- 68 Full Papers (Peer-reviewed)
- 51 Short Papers (Peer-reviewed)
- 13 Case Studies (Curated)
- 20 Industry Presentations (Curated)
- 7 Courses (Curated)
- 5 Demonstrations (Curated)
- 3 Panels (Curated)
- 9 Workshops (Juried)
- 7 Field Trips (Juried)
- 11 Interactive Posters (Juried)
- 9 Installations (Juried)
- 6 Doctoral Consortium (Juried)
- 15 Student Research Consortium (Juried)
- 6 Student Design Consortium (Juried)

The acceptance rate for contributions received in the peer reviewed tracks was 30.7% for full papers and 29.1% for short papers.

INTERACT 2017 is made possible by the persistent efforts across several months by 49 chairs, 39 associate chairs, 55 student volunteers and 499 reviewers; and the generous support of our sponsors and partners. We thank them all.

Hope you enjoy the conference!

Anirudha Joshi & Girish Dalvi
(General Co-chairs, INTERACT 2017)

Marco Winckler
(Technical Program Chair, INTERACT 2017)



Day 1 | Monday, September 25

8:00 AM	Registration Opens
8:30 AM	Workshops: WS1 (Lecture Hall 22), WS4 (Lecture Hall 23), WS10 (Lecture Hall 31), WS11 (Lecture Hall 21), Field Trips: FT1, FT3, FT4, FT9
11:00 AM	Tea
11:30 AM	Workshops (continued) Field Trips (continued) Student Design Consortium (Lecture Hall 33)
12:50 PM	Lunch
2:00 PM	Workshops (continued) Field Trips (continued)
3:20 PM	Tea
3:50 PM–5:10 PM	Workshops (continued) Field Trips (continued)
6:00 PM–8:00 PM	Freshies' Night (Professor B. Nag Auditorium)



Day 2 | Tuesday, September 26

8:00 AM	Registration Opens
8:30 AM	Workshops: WS6 (Lecture Hall 22), WS9 (Lecture Hall 31), WS11 (Lecture Hall 21), WS13 (Lecture Hall 32), WS14 (Lecture Hall 32) Field Trips: FT1, FT4, FT5, FT9, FT10 Symposium: Asian HCI Research (Professor B. Nag Auditorium) Doctoral Consortium (Lecture Hall 33)
11:00 AM	Tea
11:30 AM	Workshops (continued) Field Trips (continued) Symposium: Asian HCI Research (continued) Doctoral Consortium (continued)
12:50 PM	Lunch
2:00 PM	Workshops (continued) Field Trips (continued) Symposium: Asian HCI Research (continued) Doctoral Consortium (continued)
3:20 PM	Tea
3:50 PM–5:10 PM	Workshops (continued) Field Trips (continued) Symposium: Asian HCI Research (continued) Doctoral Consortium (continued)
5:30 PM	Dance Classes for Dandia Night (VMCC Terrace, Second Floor)



Day 3 | Wednesday, September 27

	Lecture Hall 21	Lecture Hall 22	Lecture Hall 23
7:30 AM	Registration Opens		
8:30 AM Plenary	<i>Opening Keynote (Professor B. Nag Auditorium)</i> Albrecht Schmidt: Amplifying Human Abilities: Digital Technologies to Enhance Perception and Cognition		
10:30 AM Tea	Posters, Demonstrations, and Installations open (Ground & First Floor)		
11:00 AM Session 1	1a (<i>Papers</i>): Human perception, cognition, and behaviour	1b (<i>Papers</i>): UX adoption in the organizations	1c (<i>Papers</i>): Personalization and visualization
12:20 PM	Lunch (VMCC Terrace, Second Floor)		
1:30 PM Session 2	2a (<i>Papers</i>): Methods and tools for user interface evaluation	2b (<i>Papers</i>): Interaction at the workplace	2c (<i>Papers</i>): Co-design studies
2:50 PM Plenary	<i>Invited Talk (Professor B. Nag Auditorium)</i> Rama Bijapurkar: Understanding Consumer India and what businesses need to do to serve them better		
4:00 PM Tea	Posters, Demonstrations, and Installations (Ground & First Floor)		
4:30 PM Session 3	3a (<i>Papers</i>): Virtual Reality and feeling of immersion	3b (<i>Papers</i>): Security and trust	3c: Panel 1: Different shades of user involvement
6:30 PM–8:00 PM	Dandia Night (VMCC Terrace, Second Floor)		



Lecture Hall 31	Lecture Hall 32	Lecture Hall 33
1d (Course): C4: Children Participating in HCI Research	1e (Course): C7: Designing a Successful Product with Design Sprint	
2d (Course): C1: The Science behind User Experience Design (1/2)	2e: Case studies of mobile applications and interaction in the move	2f: Student Research Consortium
3d (Course): C1: The Science behind User Experience Design (2/2)	3e: Industry Presentations I	3f: Student Research Consortium



Day 4 | Thursday, September 28

	Lecture Hall 21	Lecture Hall 22	Lecture Hall 23
7:30 AM	Registration Opens		
8:30 AM	<i>Invited Talk (Professor B. Nag Auditorium)</i> Gerrit van der Veer: Human-Computer Interaction—the Life and Times, and the History		
9:40 AM Session 4	4a (<i>Papers</i>): Audience engagement	4b (<i>Papers</i>): Mediated communication in eHealth	4c (<i>Papers</i>): Social media and design innovation
11:00 AM Tea	Posters, Demonstrations, and Installations (Ground & First Floor)		
11:30 AM Session 5	5a (<i>Papers</i>): Information on demand, on the move, and gesture interaction	5b (<i>Papers</i>): Assistive technology for blind users	5c (<i>Papers</i>): New interaction techniques
12:50 PM	Lunch (VMCC Terrace, Second Floor)		
2:00 PM Session 6	6a (<i>Papers</i>): Games	6b (<i>Papers</i>): Persuasive technology and rehabilitation	6c: Panel 2: Novel Interfaces and Future Applications
3:20 PM Tea	Posters, Demonstrations, and Installations (Ground & First Floor)		
3:50 PM Plenary	<i>Invited Talk (Professor B. Nag Auditorium)</i> Devdutt Pattanaik: Designing a ‘Mahabharata for Children’—Challenges		
5:10 PM	Adobe Sponsor Tutorial		IIT Bombay Campus Walk
5:30 PM		HCIPAI Member Meet	
7:00 PM	Conference Dinner at <i>Meluha The Fern, Powai</i>		



	Lecture Hall 31	Lecture Hall 32	Lecture Hall 33
	4d (Course): C2: Design of Location-based Mobile Games: Introduction (1/2)	4e: Industry Presentations II	
	5d (Course): C2: Design of Location-based Mobile Games: Introduction (2/2)	5e: Industry Presentations III	
	6d (Course): C5: Designing for Accessibility	6e: Case studies of interaction in meeting places and in classrooms	



Day 5 | Friday, September 29

	Lecture Hall 21	Lecture Hall 22	Lecture Hall 23
7:30 AM	Registration Opens		
8:30 AM	<i>Invited Talk (Professor B. Nag Auditorium)</i> Tom Gross: Towards Human-Centered Collaborative Computing		
9:40 AM Session 7	7a (<i>Papers</i>): Multitouch interaction	7b (<i>Papers</i>): Aging and disabilities	7c (<i>Papers</i>): Digital inclusion
11:00 AM Tea	Posters, Demonstrations, and Installations (Ground & First Floor)		
11:30 AM Session 8	8a (<i>Papers</i>): Pointing and target selection	8b (<i>Papers</i>): Interaction with children	8c (<i>Papers</i>): Cultural differences and communication technology
12:50 PM	Lunch (VMCC Terrace, Second Floor)		
2:00 PM Session 9	9a (<i>Papers</i>): Adaptive design and mobile applications	9b (<i>Papers</i>): Design rationale and camera-control	9c: Panel 3: Interactive Panel: Designing with Culture in Mind
3:20 PM Tea	Posters, Demonstrations, and Installations (Ground & First Floor)		
3:50 PM–5:20 PM Plenary	<i>Closing Keynote (Professor B. Nag Auditorium)</i> Matt Jones: Weaving New Mobile UX Futures Through Integrated Innovation Across 3 Continents, 4 Countries and a Diversity of Perspectives		



Lecture Hall 31	Lecture Hall 32	Lecture Hall 33
7d (Course): C3: Designing and Assessing Interactive Systems Using Task Models (1/2)	7e: Industry Presentations IV	7f: Pitney Bowes Design Challenge— Final Presentations
8d (Course): C3: Designing and Assessing Interactive Systems Using Task Models (2/2)	8e: Industry Presentations V	8f: Field Trips Summary
9d (Course): C6: Introduction to Service Design for Digital Health	9e: Case studies of HCI in organizations	9f: Workshops Summary

Keynotes and Invited Talks



Albrecht Schmidt

Computer Scientist and Professor

Amplifying Human Abilities: Digital Technologies to Enhance Perception and Cognition

Opening Keynote

Wednesday, September 27 | 8:30 AM

Venue: Professor B. Nag Auditorium

Chair: Philippe Palanque

Amplifying Human Abilities: Digital Technologies to Enhance Perception and Cognition

Historically, the use and development of tools is strongly linked to human evolution and intelligence. The last 10,000 years show a stunning progress in physical tools that have transformed what people can do and how people live. Currently, we are at the beginning of an even more fundamental transformation: the use of digital tools to amplify the mind.

Digital technologies provide us with entirely new opportunities to enhance the perceptual and cognitive abilities of humans. Many ideas, ranging from mobile access to search engines, to wearable devices for life-logging and augmented reality application give us first indications of this transition.

In our research we create novel digital technologies that systematically explore how to enhance human cognition and perception. Our experimental approach is to: first, understand the users in their context as well as the potential for enhancement. Second, we create innovative interventions that provide functionality that amplifies human capabilities. And third, we empirically evaluate and quantify the enhancement that is gained by these developments. It is exciting to see how ultimately these new ubiquitous computing technologies have the potential for overcoming fundamental limitations in human perception and cognition.

Speaker Bio

Albrecht Schmidt is a professor for Human Computer Interaction and Cognitive Systems at the University of Stuttgart. Previously he was a Professor for User Interface Engineering and Pervasive Computing at University of Duisburg-Essen.

In 2006/2007 he had a joint appointment between the University of Bonn and the Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS) working in the area of Media Informatics. He studied computer science in Ulm, Germany and Manchester, UK and received in 2003 a PhD from the Lancaster University in the UK.

For the last 15 years Albrecht has been dedicated to creating usable systems. The focus of his current work is on novel user interfaces to enhance and amplify human cognition. He is working on interaction techniques and interactive applications in the context of mobile and ubiquitous computing, including new communication interfaces and user interfaces in the car.

Albrecht has published well over 200 refereed archival publications and his work is widely cited. He is co-founder of the ACM conference on Tangible and Embedded Interaction (TEI) and initiated the ACM conference on Automotive User Interfaces (auto-ui.org).

In 2014 Albrecht co-chaired the ACM SIGCHI program. He is on the editorial board of ACM ToCHI, edits a forum on interaction technologies in the ACM Interactions magazine, and has a column in the IEEE Pervasive Computing Magazine.

In 2016 Albrecht Schmidt received a ERC Consolidator Grant to work on the Project “AMPLIFY: Amplifying Human Perception Through Interactive Digital Technologies”. ■



Rama Bijapurkar

Author, Consultant and Strategist

Understanding Consumer India and
What Businesses Need to do to Serve
Them Better

Invited Talk

Wednesday, September 27 | 2:50 PM

Venue: Professor B. Nag Auditorium

Chair: Shashank Deshpande

Understanding Consumer India and What Businesses Need to do to Serve Them Better

People who address Consumer India or People India and develop products for them need to get away from traditional/offering wrong mental models of what emerging market consumers are like or what poor people and uneducated people are like—what their capabilities are, what their priorities are, what their mindsets and life conditions are and so on.

India is a never-before world. Never-before in human history have we had so many young people with modest incomes and even more modest education, come of age post the birth of the Internet and the mobile and digital money, combined with pathetic infrastructure and informal service sector jobs.

The logic of this world of Consumer India is to be listened to, from the inside, in order to serve it better, and build capabilities and products and ideas that can be valuable in other markets too.

Sensible as all this seems, why do companies have trouble doing this? Even champion global companies?

Speaker Bio

Ms. Bijapurkar is a recognized thought leader on market strategy and India's consumer economy, and is a keen commentator on social and cultural trends in fast-changing India. She has an independent management consulting practice and works with a range of global and domestic companies, across sectors, helping them in the development of their business-market strategy.

She has served as an independent director on the boards of several of India's blue chip companies. Past and present boards include Axis Bank, Crisil, Infosys, Bharat Petroleum, Godrej Consumer Products, Mahindra & Mahindra Financial Services Limited, ICICI Prudential Life Insurance Company Limited, Redington Gulf FZE, Titan Industries, Janalakshmi Financial Services, National Payments Corporation of India, Nestle India Ltd., etc.

She is also chairperson and co-founder of People Research on India's Consumer Economy a newly set up not-for-profit think tank and fact tank, dedicated to providing 'household and people-level' data and insights for business strategy and public policy.

Ms. Bijapurkar has a BSc Hons in Physics from Delhi University and a Post Graduate Diploma in Management from Indian Institute of Management, Ahmadabad. She has previously worked with MODE Services (now TNS India), MARG (now Nielsen India), McKinsey & Co. and also been a full time consultant with Hindustan Unilever Ltd. ■



Gerrit van der Veer

Emeritus Prof., Past President of ACM
SIGCHI

Human-Computer Interaction—The Life
and Times, and the History

Invited Talk

Thursday, September 28 | 8:30 AM

Venue: Professor B. Nag Auditorium

Chair: Marco Winckler

Human-Computer Interaction—The Life and Times, and the History

HCI and Interact are here to stay. Many of us are born in a society where social media and smartphones are the common way of living. We take the opportunities for granted, and just develop ideas to broaden the use and to enable ever more innovative application, including cheap facilities for developing regions.

We label our field: Human-Computer Interaction, Interaction Design, Usability Engineering—old words that could now be replaced by “Experience Design”. Or should they? We live in the clouds, our friends and family live on Facebook, and our watch is our coach and our physician. But how did this all start, and who were the pioneers to found the science and practice of Affordance Design, Cognitive Engineering and Software Ergonomics? Is it industry that started by inventing interactive systems, or the scientists who build theories

and models for the user interface: What were the chickens that produced the egg of HCI?

In this talk you will learn about blue-grass movements in different parts of the world that did result in understanding, theories, prototypes, and approaches. The talk will illustrate how this was discussed and disseminated in communities and at conferences, how this evolved into education and standards, and how this resulted in recognition of our professional field as the base for design of usable, comprehensive, enjoyable, absorbing and un-avoidable tools, culminating in a new context of life and society, and new cultures.

Speaker Bio

Gerrit C. van der Veer has been a researcher and teacher in University since 1961. He started in Cognitive Psychology, moved to Cognitive Ergonomics, and into Computer Science, where he specialized in design of interactive systems. He has been developing HCI

curricula, and teaching HCI in many European countries including Belgium, Germany, Spain, Italy, Romania, and the Netherlands, as well as in China.

His research concerns user centered design methods, task modeling, individual differences and cultural diversity, mental models, cultural heritage, and visualization.

He is currently supervising PhD Students for several Dutch Universities and in Italy; and teaching courses

at the Maritime University of Dalian (China) Sino-European Usability Centre; and at LuXun Academy of Fine Arts, Department of Multimedia and Animation, Shenyang (China).

Gerrit is Past President of ACM SIGCHI, the world leading international society for human-computer interaction, and Co-founder and Past President of the European Association of Cognitive ergonomics. ■



Devdutt Pattanaik

Mythologist, Author and Illustrator

Designing a 'Mahabharata For Children'—Challenges

Invited Talk

Thursday, September 28 | 3:50 PM

Venue: Professor B. Nag Auditorium

Chair: Sugandh Malhotra

Designing a 'Mahabharata For Children'—Challenges

Speaker Bio

Devdutt Pattanaik writes on relevance of mythology in modern times, especially in areas of management, governance and leadership.

Trained in medicine, he worked for 15 years in the healthcare and pharma industries before he focused on his passion full time. He is author of 30 books and 600 columns, with bestsellers such as My Gita, Jaya, Sita, Business Sutra and the 7 Secret Series.

He was a speaker at TEDIndia 2009 and spoke on Myths that Mystify, East versus West. His TV shows include Business Sutra on CNBC-TV18 and Devlok on Epic tv. He consults organizations on culture, diversity and leadership and also consults various television channels and filmmakers on storytelling. ■



Tom Gross

Professor in Human-Computer Interaction

Towards Human-Centered
Collaborative Computing

Invited Talk

Friday, September 29 | 8:30 AM

Venue: Professor B. Nag Auditorium

Chair: Anirudha Joshi

Towards Human-Centered Collaborative Computing

Human-centred computing can be seen as approach that departs from a human, social, and cultural understanding in order to make technology useful and usable. Taking this approach his research aims to develop technological concepts, prototypes, and systems based on an understanding of how people interact with and communicate through computing technology.

In this talk he shares general thoughts on the approach and gives specific examples from his work.

Speaker Bio

Tom Gross is full professor and chair of Human-Computer Interaction at the University of Bamberg, Germany. His research interests are Human-Computer Interaction, Computer-Supported Cooperative Work, and Ubiquitous Computing. In these areas he has numerous publications, and has participated in and coordinated activities in various national and international research projects.

He is a member of the IFIP's TC13 on Human-Computer Interaction. He has been conference co-chair and organizer of many international conferences (e.g., INTERACT 2015 in Bamberg). He received a PhD from the Johannes Kepler University Linz, Austria. ■



Matt Jones

Professor of Computer Science

Weaving New Mobile UX Futures Through Integrated Innovation across 3 Continents, 4 Countries and a Diversity of Perspectives

Closing Keynote

Friday, September 29 | 3:50 PM

Venue: Professor B. Nag Auditorium

Chair: Jan Gulliksen

Weaving New Mobile UX Futures Through Integrated Innovation across 3 Continents, 4 Countries and a Diversity of Perspectives

Mobile and ubiquitous computing researchers have long imagined future worlds for users in developed regions. Steered by such visions, they have innovated devices and services exploring the value of these with and for individuals, groups and communities. Meanwhile, such radical and long-term explorations are uncommon for what have been termed emergent users; users, that is, for whom advanced technologies are just within grasp. Instead, a driving assumption is, perhaps, that today's high-end mobile technologies will "trickle down" to these user groups in due course.

For the past three years, our team of researchers and partner organizations have started to explore how to do future envisioning that includes emergent communities. We have carried out intensive, coordinated innovation-prototyping-deployment yearly cycles that has seen us work with people from townships in South Africa and informal and slum districts in India and Kenya. These activities have seen the development of a number of novel mobile devices and services that would not have emerged without the insights provided and integrated across these regions.

In this talk, I will explore what mobile technologies might be like if emergent users are directly involved in creating their visions for the future 5–10 years from now; explain and reflect on our methods, highlighting the success and failures; detail some of the platforms and devices we've created; and, argue that such innovation

is also vital to re-invigorate mobile design for the "traditional users" (like me) in the rest of the world.

Speaker Bio

Matt Jones is the author of two books and many research articles that have helped shape the field of Mobile HCI and UX (Mobile Interaction Design—with Gary Marsden; and There's Not an App for That—with Simon Robinson and Gary Marsden).

He has spoken at events with both an arts focus (such as the Hay Book Festival 2017) and the sciences (such as this the British Science Festival 2016). He has worked both with academic research groups and industrial partners across the world. His work combines a passion for invention with a commitment to working alongside non-traditional users of mobile technology.

He is a Royal Society Wolfson Research Merit Award Holder (for his work on interactions for resource constrained communities); was awarded an IBM Faculty Award (for work with the Spoken Web); and leads two major UK programmes focused on human values and computational science (the Research Council UK funded Digital Economy CHERISH Centre; and the Welsh Government/ EU funded Computational Foundry). He has enjoyed being part of the HCI community: he co-chaired ACM CHI 2014; ACM Mobile HCI 2017; and is on the steering committee of both of these conference series. ■



Detailed Program

Monday, September 25 | 8:30 AM onwards

Workshops

WS1 (Lecture Hall 22)

Service Design Meets Design for Behaviour Change:
Opportunities and Challenges
*Ravi Mahamuni, Pramod Khambete, and
Ravi Mokashi-Punekar*

WS4 (Lecture Hall 23)

Designing Gestures for Interactive Systems: Towards
Multicultural Perspectives
*Frederic Bevilacqua, Anne Dubos, Joseph Larralde,
Joel Chevrier, and Jean-Francois Jago*

WS10 (Lecture Hall 31)

Multimodality in Embodied Experience Design
Mehul Bhatt, Clayton Lewis, and Vipul Nair

WS11 (Lecture Hall 21)

Human Work Interaction Design meets International
Development
*Pedro Campos, Torkil Clemmensen, Barbara Barricelli,
Jose Abdelnour-Nocera, Arminda Lopes, and
Frederica Gonsalves*

Field Trips

FT1

Understanding The Informal Support Networks Of
Older Adults in India
Dr. Arne Berger

FT3

Parental Perspectives Towards Education Technology in
Low-Income Urban households
*Sumita Sharma, Juhani Linna, Biju Thankachan, Markku
Turunen, Heli Väättäjä, Pekka Kallioniemi, Janet C Read, and
Gavin Sim*

FT4

Investigating Perceptions of Personalization and Privacy
in India
*Hanna Schneider, Ceenu George, Malin Eiband, and
Florian Lachner*

FT9

Understanding Early Technology Adoption by the
Emergent Older Adults in Dharavi
Shaon Sengupta, Sayan Sarcar, and Anirudha Joshi

Monday, September 25 | 11:30 AM onwards

Student Design Consortium (Lecture Hall 33)

Community Based System Design for Indian
Railways in the Context of Senior Citizens
Atul Kumar

Seek: Art Teaching Aid
Abhijith KR

Service design for blood bank system
Suchismita Naik

SwitchTabs : More Efficient Natural Interaction
With Browser Tabs
Chinmay Anand , Kushagra Khandelwal , Sunny Kumar

TouchPIN: Numerical Passwords You
Can Feel
Gesu India

Round table discussion

Tuesday, September 26 | 8:30 AM onwards

Workshops

WS6 (Lecture Hall 22)

Beyond Computers: Wearables, Humans, And Things—WHAT!

Peter Dannenmann, Nahum Gershon, Achim Ebert, and Gerrit van der Veer

WS9 (Lecture Hall 31)

Designing Humor in Human-computer Interaction
Andreea Niculescu, Anton Nijholt, Alessandro Valitutti, and Rafael Banchs

WS11 (Lecture Hall 21)

Human Work Interaction Design meets International Development
Pedro Campos, Torkil Clemmensen, Barbara Barricelli, Jose Abdelnour-Nocera, Arminda Lopes, and Frederica Gonsalves

WS13 (Lecture Hall 32)

Cross Cultural Differences in Designing for Accessibility and Universal Design
Helen Petrie

Symposium on Asian HCI Research (Professor B. Nag Auditorium)

Yoshifumi Kitamura, Minghui Sun, Eunice Sari, Jinwoo Kim, Simon Perrault, Kaveh Bazargan, Chui Yin Wang, Nova Ahmed, Ebtisam Alabdulqader, Thippaya Chintakoviā, and Anshuman Sharma

WS14 (Lecture Hall 32)

Workshop on Dealing with Conflicting User Interface Properties in User-Centered Development Processes
Marco Winckler, Marta Larusdottir, Cristian Bogdan, Kati Kuusinen, and Philippe Palanque

Field Trips

FT1

Understanding The Informal Support Networks Of Older Adults in India
Dr. Arne Berger

FT4

Investigating Perceptions of Personalization and Privacy in India
Hanna Schneider, Ceenu George, Malin Eiband, and Florian Lachner

FT5

Modelling Less-literate User's Choices of Smartphone Authentication Modes
Pankaj Doke, Sylvan Lobo, Shyama V. S, Ulemba Hirom and Mridul Basumotari

FT9

Understanding Early Technology Adoption by the Emergent Older Adults in Dharavi
Shaon Sengupta, Sayan Sarcar and Anirudha Joshi

FT10

ICT Based Interventions for Anganwadi Healthcare Workers in Mumbai
Biju Thankachan, Sumita Sharma, Markku Turunen, Juhani Linna, Heli Väättäjä, Reinier Kortekaas, and Tom Gross

Doctoral Consortium (Lecture Hall 33)

Connected Objects to Support Parents and their Adult Children
Bhagyashree Patil, Danae Stanton-Fraser, Jeff Gavin, and Clare Reddington

Design Guideline for Smartphone Menu Types and Icon Design for Children, Adult, and Elderly Users
Lumpapun Punchoojit, and Nuttanont Hongwarittorn

Designing information and communication practices for social and situated learning systems in socioeconomic development
Linus Kendall

Designing Peripheral Interaction for Secondary School Teachers
Pengcheng An

The Mediation of Cultural Values between Privacy Calculus Decisions and Information Disclosure Behaviors in Social Network Sites
Siti Zainab Ibrahim, Maslin Masrom, and Kamillah Radin Salim

Virtual Movement from Textual Instructions
Himangshu Sarma

Wednesday, September 27 | 8:30 AM | Opening Keynote
(Professor B. Nag Auditorium)

Albrecht Schmidt: Amplifying Human Abilities:
Digital Technologies to Enhance Perception
and Cognition
Chair: Philippe Palanque



Tea | 10:30 AM

Session 1

Wednesday, September 27 | 11:00 AM

Session 1a: Human perception, cognition and behaviour
(Lecture Hall 21)

Chair: Rosa Arriaga

Full Paper: I Smell Creativity: Exploring the Effects
of Olfactory and Auditory Cues to Support Creative
Writing Tasks

*Frederica Gonçalves, Diogo Cabral, Pedro Campos, and
Johannes Schöning*

Full Paper: Night Mode, Dark Thoughts: Background
Color Influences the Perceived Sentiment of
Chat Messages

Diana Löffler, Lennart Giron, and Jörn Hurtienne

Full Paper: Subjective usability, mental workload
assessments and their impact on objective
human performance
Luca Longo

Full Paper: What is user's perception of Naturalness?
An Exploration of Natural User Experience
*Sanjay Ghosh, Chivukula Sai Shruithi, Himanshu Bansal, and
Arvind Sethia*

Session 1b: ux adoption in the organizations
(Lecture Hall 22)

Chair: Atul Manohar

Short Paper: Active Involvement of Software Developers
in Usability Engineering: Two Small-Scale Case Studies
Nis Bornoe, and Jan Stage

Full Paper: Adoption of UX Evaluation in Practice: An
Action Research Study in a Software Organization
*Kristine Bang, Martin Akto Kanstrup, Adam Kjems, and
Jan Stage*

Short Paper: Empowering Project Managers in
Enterprises - A Design Thinking approach to manage
Commercial Projects

Aparna Kongot, and Monisha Pattanaik

Full Paper: Learning HCI Across Institutions,
Disciplines and Countries: A Field Study of Cognitive
Styles in Analytical and Creative Tasks

*José Abdelnour-Nocera, Torkil Clemmensen, and
Tatiane G. Guimaraes*



Full Paper: UX Professionals' Definitions of Usability
and UX – A Comparison between Turkey, Finland,
Denmark, France, and Malaysia
*Dorina Rajanen, Torkil Clemmensen, Netta Iivari, Yavuz Inal,
Kerem Rizvanoğlu, Ashok Sivaji, and Amélie Roche*

Session 1c: Personalisation and Visualization
(Lecture Hall 23)

Chair: R Venkatesh

Full Paper: Grab 'n' Drop: User Configurable Toolglasses
James R. Eagan

Short Paper: Shelves: A User-defined Block Management
Tool for Visual Programming Languages
*Sheng-Yi Hus, Yuan-Fu Lou, Shing-Yun Jung, and
Chuen-Tsai Sun*

Full Paper: Text Priming—Effects of Text Visualizations
on Readers Prior to Reading
*Tilman Dinger, Dagmar Kern, Katrin Angerbauer, and
Albrecht Schmidt*

Short Paper: The Panta Rhei: Modernizing the Marquee
Megan Monroe and Mauro Martino

Full Paper: Your Data, Your Vis: Personalizing Personal
Data Visualizations
*Hanna Schneider, Katrin Schauer, Clemens Stachl, and
Andreas Butz*Session

Session 1d: Course (Lecture Hall 31)

Course C4: Children Participating in HCI Research
Janet Read (University of Central Lancashire, UK)

Session 1e: Course (Lecture Hall 32)

Course C7: Designing a Successful Product with
Design Sprint
Eunice Sari, and Adi Tedjasaputra (UX Indonesia)



Lunch | 12:20 PM

Session 2

Wednesday, September 27 | 1:30 PM

Session 2a: Methods and tools for user interface evaluation (Lecture Hall 21)

Chair: Girish Dalvi

Short Paper: A Model to Compute Webpage Aesthetics Quality based on Wireframe Geometry
Ranjan Maity, and Samit Bhattacharya

Full Paper: Bringing Worth Maps a step further: A dedicated Online-Resource
Fatoumata G. Camara, and Gaëlle Calvary

Full Paper: Extending Mobile App Analytics for Usability Test Logging
Xavier Ferre, Elena Villalba, Héctor Julio, and Hongming Zhu

Short Paper: NexP: A Beginner Friendly Toolkit for Designing and Conducting Controlled Experiments
Xiaojun Meng, Pin Sym Foong, Simon Perrault, and Shengdong Zhao

Full Paper: UX Metrics: Deriving Country-Specific Usage Patterns of a Website Plug-in From Web Analytics
Florian Lachner, Florian Fincke, and Andreas Butz

Session 2b: Interaction at the workplace (Lecture Hall 22)

Chair: Torkil Clemmensen



Full Paper: FeetForward: on Blending New Classroom Technologies into Secondary School Teachers' Routines
Pengcheng An, Saskia Bakker, and Berry Eggen

Full Paper: Human-Building Interaction: When the machine becomes a building
Julien Nembrini, and Denis Lalanne

Short Paper: Investigating Wearable Technology for Fatigue Identification in the Workplace
Christopher Griffiths, Judy Bowen, and Annika Hinze

Short Paper: Leveraging Conversational Systems to assists New Hires during Onboarding
Praveen Chandar, Yasaman Khazaeni, Matthew Davis, Micheal Muller, Marco Crasso, Q. Vera Liao, N. Sadat Shami, and Werner Geyer

Short Paper: RemindMe: Plugging a Reminder Manager into Email for Enhancing Workplace Responsiveness
Casey Dugan, Aabhas Sharma, Michael Muller, Di Lu, Michael Brenndoerfer, and Werner Geyer

Short Paper: The Cost of Improved Overview: An analysis of the Use of Electronic Whiteboards in Emergency Departments
Morten Hertzum

Session 2c: Co-design studies (Lecture Hall 23)

Chair: Jacki O' Neill

Full Paper: A Co-design Study of Digital Service Ideas in the Bus Context
Elina Hildén, Jarno Ojala, and Kaisa Väänänen

Full Paper: Designing for Financial Literacy: Co-Design with Children in Rural Sri Lanka
Thilina Halloluwa, Dhaval Vyas, Hakim Usoof, Pradeepa Bandara, Margot Brereton, and Priyantha Hewagamage

Short Paper: Everyday Creative Uses of Smartphone Images in Biomedical Engineering Laboratories
Dhaval Vyas, Hinal Vyas, and Maria A. Woodruff

Full Paper: Towards Participatory Prototyping with Older Adults with and without Cognitive Impairment: Challenges and Lessons Learned
Luã Marcelo Muriana, and Heiko Hornung

Short Paper: Using Critical Incidents in Workshops to Inform eHealth Design
Christiane Grünloh, Jean D. Hallewell Haslwanter, Bridget Kane, Eunji Lee, Thomas Lind, Jonas Moll, Hanife Rexhepi, and Isabella Scandurra

Session 2d: Course (Lecture Hall 31)

Course C1 (1/2): The Science behind User Experience Design
Asad Ali Junaid

Session 2e: Case studies of mobile applications and interaction in the move (Lecture Hall 32)

Chair: Ravi Poovaiah

Case Study: Ability-based Optimization: Designing Smartphone Text Entry Interface for Older Adults
Sayan Sarcar, Jussi Jokinen, Antti Oulasvirta, Xiangshi Ren, Chaklam Silpasuwanchai, and Zhenxin Wang

Case Study: Design and Development of a Location-Based Social Networking Mobile Application
Aditi Nettar, Nishita Chowdhari, Roxan Karanjia, Pallavi Rao Gadahad, and Sneha Deshmukh

Case Study: Expectation and experience: Passenger acceptance of autonomous public transportation vehicles
Grace Eden, Benjamin Nanchen, Randolph Ramseyer, and Florian Evéquoz

Case Study: On the design and evaluation of Nippon Paint Color Visualizer application—a case study
Kuldeep Kulshreshtha, Andreea I. Niculescu, and Bimlesh Wadhwa

Session 2f: Student Research Consortium (1/2) (Lecture Hall 33)

Chairs: Naveen Bagalkot, Janet Wesson

Disambiguation Keyboard for Blind
Neel Koradia, and Simran Pandey

Evaluation of Thumb-Movement Alternacy for Two-Thumb Input in Marathi Soft Keyboard Layouts
Santanu Dutta, Nimish Maravi, and Bhakti Bhikne

How useful is 360-degree view for Cognitive Mapping?
Ambika Shahu

Probabilistic Modeling of Swarachakra Keyboard for Improved Touch Accuracy
Nikhil Wani, Adarsh Patodi, and Sumit Singh Yadav

Wednesday, September 27 | 2:50 PM

Invited Talk (Professor B. Nag Auditorium)

Rama Bijapurkar: Understanding Consumer India and what businesses need to do to serve them better

Chair: Shashank Deshpande

Session 3

Wednesday, September 27 | 4:30 PM

Session 3a: Virtual Reality and feeling of immersion (Lecture Hall 21)

Chair: Jayesh Pillai


Short Paper: Estimating Visual Discomfort in Head-Mounted Displays using Electroencephalography
Christian Mai, Mariam Hassib, and Rolf Königsbauer

Short Paper: Experience Probes: Immersion and Reflection Between Reality and Virtuality
Max Willis, Antonella De Angeli, and Massimo Zancanaro

Short Paper: Guidelines for Designing Interactive Omnidirectional Video Applications
Santeri Saarinen, Ville Mäkelä, Pekka Kallioniemi, Jaakko Hakulinen, and Markku Turunen

Full Paper: How Real is Unreal? The Impact of Visual Imagery on the Experience of Exercise-Induced Pain
Maria Matsangidou, Chee Siang Ang, Alexis R. Mauger, Boris Otkhmezuri, and Luma Tabbaa


Short Paper: Increasing Presence in Virtual Reality with a Vibrotactile Grid around the Head
Oliver Beren Kaul, Kevin Meier, and Michael Rohs

 **Full Paper:** User Experience and Immersion of Interactive Omnidirectional Videos in CAVE Systems and Head-Mounted Displays
Pekka Kallioniemi, Ville Mäkelä, Santeri Saarinen, Markku Turunen, York Winter, and Andrei Istudor

Session 3b: Security and trust (Lecture Hall 22)

Chair: Gerhard Weber

Full Paper: Coping with Accessibility Challenges for Security — A User Study with Blind Smartphone Users
Sylvan Lobo, Ulemba Hirom, Shyama V S, Mridul Basumatori, and Pankaj Doke

 **Full Paper:** Effects of Uncertainty and Cognitive Load on User Trust in Predictive Decision Making
Jianlong Zhou, Syed Z. Arshad, Simon Luo, and Fang Chen

Full Paper: Modelling Trust: An Empirical Assessment
Siddharth Gulati, Sonia Sousa, and David Lamas

Full Paper: Towards Understanding the Influence of Personality on Mobile App Permission Settings
Frederic Raber, and Antonio Krueger



Session 3c: Panel (Lecture Hall 23)

Panel 1: Different Shades Of User Involvement:
Participatory Design, Co-Design, User Centered Design

Panelists

Thilina Halloluwa, Queensland University of Technology, Australia

Elina Hilden, Tampere University of Technology, Finland

Thomas Vilarinho, SINTEF Digital, Trondheim, Norway

Janet C. Read, University of Central Lancashire, UK

Keyur Sorathia, IIT Guwahati, India

Unifying E-Commerce and Markerless Mobile
Augmented Reality Using Real-time Face Tracking and
Head Pose Estimation

*Anuradha Welivita, Nanduni Nimalsiri,
Ruchiranga Wickramasinghe, and Upekka Pathirana*

Use of ICT for behavioral change in
dietary habits

Ashish Jain, Priyanka Arora, and Umang Luhadia



Dandia Night | 6:30 PM–8:00 PM

Session 3d: Course (Lecture Hall 31)

Course C1 (2/2): The Science behind User
Experience Design
Asad Ali Junaid

Session 3e: Industry presentations I (Lecture Hall 32)

Chair: Fernando Loizides

Affective HCI: Emotional and Motivational Aspects of
Adapting to a New Technology
Anjeli Singh, and Jahnavi Mirashi (Hureo)

Experience Design for Digitalization
Veera Venkata Atmakuri (Siemens)

User Testing Vs. User Teaching
Andrew Whited (Designer)

Chatbot Platform for Services Within a Mobile
Operating System
Nikhil Karwall, and Ankita Agrawal (Indus OS)

Session 3f: Student Research Consortium (2/2)

(Lecture Hall 33)

Chairs: Naveen Bagalkot, Janet Wesson

Three Sixty Degree Vision Interfaces: Evaluation of
Performance and Eye Movements
Aniruddh Ravipati, and Ambika Shahu

Thursday, September 28 | 8:30 AM | Invited Talk
(Professor B. Nag Auditorium)

Gerrit van der Veer: Human-Computer Interaction—the Life and Times, and the History
Chair: Marco Winckler

Session 4

Thursday, September 28 | 9:40 AM

Session 4a: Audience engagement (Lecture Hall 21)

Chair: Keyur Sorathia

Short Paper: Designing Collaborative Co-located Interaction for an Artistic Installation
Oussama Mubarak, Pierre Cubaud, David Bihanic, and Samuel Bianchini

Short Paper: Designing Interactive Technologies for Interpretive Exhibitions: Enabling Teen Participation Through User-Driven Innovation
Vanessa Cesário, Sónia Matos, Marko Radeta, and Valentina Nisi

 **Full Paper:** Haunting Space, Social Interaction in a Large-Scale Media Environment
Jan C. Schacher, and Daniel Bisig

Full Paper: In-the-moment and beyond: Combining post-hoc and real time data for the study of audience perception of electronic music performance
S. M. Astrid Bin, Fabio Morreale, Nick Bryan-Kinns, and Andrew P. McPherson

Short Paper: Piano Staircase: Exploring Movement-based Meaning Making in Interacting with Ambient Media
Liang Tan, and Kenny K. N. Chow

Session 4b: Mediated communication in eHealth (Lecture Hall 22)

Chair: Janet Wesson

Full Paper: Co-designing a mHealth application for self-management of cystic fibrosis
Thomas Vilarinho, Jacqueline Floch, and Erlend Stav

Short Paper: Even when Icons are Not Worth a Thousand Words They are Helpful in Designing Asthma mHealth Tools
Michael Lefco, Jensi Gise, Burton Lesnick, and Rosa I. Arriaga

Full Paper: Keeping Children Safe Online: Understanding the Concerns of Carers of Children with Autism
Mike Just, and Tessa Berg

Short Paper: Mediating Interaction between Healthcare Professionals and Patients with a Dual-Sided Tablet
Ashley Colley, Juho Rantakari, Lasse Virtanen, and Jonna Häkklä

Short Paper: Stimulating Conversations in Residential Care through Technology-mediated Reminiscence
Francisco Ibarra, Marcos Baez, Francesca Fiore, and Fabio Casati

Short Paper: Viability of Magazines for Stimulating Social Interactions in Nursing Homes
Valentina Caforio, Marcos Baez, and Fabio Casati

Session 4c: Social media and design innovation (Lecture Hall 23)

Chair: Naveed Ahmed

Full Paper: 10 Design Themes for Creating 3D Printed Physical Representations of Physical Activity Data
Rohit Ashok Khot, Simon Stusak, Andreas Butz, and Florian 'Floyd' Mueller

Short Paper: Breathing Friend: Tackling Stress through Portable Tangible Breathing Artifact
Miroslav Macík, Katerina Prazakova, Anna Kutikova, Zdenek Mikovec, Jindrich Adolj, Jan Havlik, and Ivana Jilekova

Short Paper: Citizen Tagger: Exploring social tagging of conversational audio
Delvin Varghese, Patrick Olivier, and Madeline Balaam

Short Paper: Exploring Offline Context and Consciousness in Everyday Social Media Use
Yubo Kou

Full Paper: Special Digital Monies: The Design of Alipay and WeChat Wallet for Mobile Payment Practices in China
Yong Ming Kow, Xinning Gui, and Waikuen Cheng

Session 4d: Course (Lecture Hall 31)

Course C2 (1/2): Design of Location-based Mobile Games: Introduction
Christos Sintoris, Nikoleta Yiannoutsou, and Nikolaos Avouris (University of Patras, Greece)

Session 4e: Industry presentations II (Lecture Hall 32)
Chair: Ishneet Grover

Design Sprints: Concept to Completion
Natasha Sant (Google Inc.)

Designing for Billions
Natasha Sant (Google Inc.)

Importance of Human Factors in Medical Devices
Jitesh Jaidev Jumani, Nitin KD, and Deepak Arasu (HCL Technologies Ltd.)

Event-based and state-based visual interfaces for learning computer programming and robotics
Sumesh Jaiswal (Symantec Software)



Tea | 11:00 AM

Session 5 Thursday, September 28 | 11:30 AM

Session 5a: Information on demand, on the move, and gesture interaction (Lecture Hall 21)
Chair: Yoshifumi Kitamura

Full Paper: Presenting Information on the Driver's Demand on a Head-Up Display
Renate Haeulschmid, Christopher Klaus, and Andreas Butz

Full Paper: Seeing Through the Eyes of Heavy Vehicle Operators
Markus Wallmyr

Short Paper: TrackLine: Refining touch-to-track Interaction for Camera Motion Control on Mobile Devices
Axel Hoesl, Sarah Aragon Bartsch, and Andreas Butz

Full Paper: Understanding Gesture Articulations Variability
Orlando Erazo, Yosra Rekik, Laurent Grisoni, and José A. Pino

Short Paper: Watching Your Back While Riding Your Bike: Designing for Preventive Self-Care During Motorbike Commuting
Tomas Sokoler, and Naveen L Bagalkot

Session 5b: Assistive technology for blind users (Lecture Hall 22)
Chair: Prachi Sakhardande

Full Paper: Blind FLM: An Enhanced Keystroke-Level Model for Visually Impaired Smartphone Interaction
Shiroq Al-Megren, Wejdan Altamimi, and Hend S. Al-Khalifa

Full Paper: Comparing Two Approaches of Tactile Zooming on a Large Pin-matrix Device
Denise Prescher, and Gerhard Weber

Short Paper: Improve the Accessibility of Tactile Charts
Christin Engel, and Gerhard Weber

Short Paper: Investigations on Laterotactile Braille Reading
Anupama Thomas, and Elizabeth Rufus

Full Paper: Performance of Accessible Gesture-based Indic Keyboard
Pabba Anu Bharath, Charudatta Jadhav, Shashank Ahire, Manjiri Joshi, Rini Ahirwar, and Anirudha Joshi

Session 5c: New interaction techniques (Lecture Hall 23)
Chair: Peter Dannenmann

Short Paper: Comfort: A Coordinate of User Experience in Interactive Built Environments
Hamed S. Alavi, Himanshu Verma, Michael Papinutto, and Denis Lalanne

Short Paper: Designing Smart Shoes for Obstacle Detection: Empowering Visually Challenged Users through ICT
Vikram Singh Parmar, and Krishna Sai Inkoolu

Full Paper: Effects of Haptic Feedback in Dual-Task Teleoperation of a Mobile Robot
José Corujeira, José Luís Silva, and Rodrigo Ventura

Full Paper: Pupil-Assisted Target Selection (PATS)
Christoph Strauch, Jan Ehlers, and Anke Huckauf

Short Paper: Effects of Human Cognitive Differences on Interaction and Visual Behavior in Graphical User Authentication
Marios Belk, Christos Fidas, Christina Katsini, Nikolaos Avouris, and George Samaras

Session 5d: Course (Lecture Hall 31)

Course C2 (2/2): Design of Location-based Mobile Games: Introduction
Christos Sintoris, Nikoleta Yiannoutsou, and Nikolaos Avouris (University of Patras, Greece)

Session 5e: Industry presentations III (Lecture Hall 32)
Chair: José Abdelnour Nocera

Designing healthcare for rural india
Noopur Varma (Nilenso Software)

Empowering the marginalised by bringing the university to their phones

Promit Sanyal, Savy A, and Aveejeet Palit
(Moonraft Innovation Labs)

Principles of Inclusive and Resilient Design on the Web
Shwetank Dixit (BarrierBreak)

Technology Platform for Social Inclusion
Ojas Vyas, and Karan Rai Bahadur (Mindtree Ltd)



Lunch | 12:50 PM

Session 6

Thursday, September 28 | 2:00 PM

Session 6a: Games (Lecture Hall 21)

Chair: Antonella De Angeli

Short Paper: Effects of Image-Based Rendering and Reconstruction on Game Developers Efficiency, Game Performance, and Gaming Experience


George E. Raptis, Christina Katsini, Christos Fidas, and Nikolaos Avouris

Short Paper: Exploring In-the-Wild Game-based Gesture Data Collection

Kiyoshi Oka, Wei-quan Lu, Kasım Özacar, Kazuki Takashima, and Yoshifumi Kitamura

 **Full Paper:** From Objective to Subjective Difficulty Evaluation in Video Games

Thomas Constant, Guillaume Levieux, Axel Buendia, and Stéphane Natkin

 **Full Paper:** Improved Memory Elicitation in Virtual Reality: New Experimental Results and Insights

Joel Harman, Ross Brown, and Daniel Johnson

Full Paper: Practice in Reality for Virtual Reality Games: Making Players Familiar and Confident with a Game

Jeffrey C. F. Ho

Session 6b: Persuasive technology and rehabilitation (Lecture Hall 22)

Chair: Sayan Sarkar

Short Paper: A Technology for Prediction and Prevention of Freezing of Gait (FOG) in Individuals with Parkinson Disease

Megh Patel, Gottumukala Sai Rama Krishna, Abhijit Das, and Uttama Lahiri

Full Paper: Designing User Interfaces in Emotionally-sensitive Applications
Alistair Sutcliffe

Short Paper: iKnowU—Exploring the Potential of Multimodal AR Smart Glasses for the Decoding and Rehabilitation of Face Processing in Clinical Populations
Simon Ruffieux, Nicolas Ruffieux, Roberto Caldara, and Denis Lalanne

Short Paper: Personalized Persuasion in Online Advertisements: A Case Study of a Micro-Funding Website
Suleman Shahid, Nicole Heise, and Sundas Zaman

Short Paper: FIT Decision Aid: Matching the Needs of People with Dementia and Caregivers with Products and Services
Nazli Cila, Hester van Zuthem, Fleur Thomése, Wilma Otten, Franka Meiland, and Ben Kröse

Short Paper: Perswedo: Introducing Persuasive Principles into the Creative Design Process through a Design Card-Set
Xipei Ren, Yuan Lu, Harri Oinas-Kukkonen, and Aarnout Brombacher

Short Paper: Towards the Applicability of NAO Robot for Children with Autism in Pakistan
Muneeb Imtiaz Ahmad, Suleman Shahid, and Anam Tahir

Session 6c: Panels (Lecture Hall 23)

Panel 2: Novel Interfaces and Future Applications

Panelists

Joel Harman, Queensland University of Technology, Brisbane Australia

Jeffrey C. F. Ho, School of Design, The Hong Kong Polytechnic University

Rohit Ashok Khot, RMIT University, Australia

Pekka Kallioniemi, University of Tampere, Finland

Max Willis, University of Trento, Italy

Session 6d: Course (Lecture Hall 31)

Course C5: Designing for Accessibility

Helen Petrie (University of York, UK), Gerhard Weber (Technische Universität Dresden, Germany), and Jenny Darzentas (University of York, UK)

Session 6e: Case studies of interaction in meeting places and in classrooms (Lecture Hall 32)

Chair: Junaid A

Augmenting the Textbook for Enaction: Designing Media for Participatory Learning in Classrooms
Priyanka Borar, Durga Prasad, Harshit Agrawal, and Sanjay Chandrasekharan

Designing Interactive Spatiotemporal Visualizations to Enhance Movie Browsing
Ana Jorge, Nuno Correia, and Teresa Chambel

From Minutes of Meeting to 'Memories of Meeting'—How we designed impactful and engaging Visual MoM for Client Visit
Lakshmi Deshpande

Leveraging Virtual Trips in Google Expeditions to Elevate Students' Social Exploration
Antigoni Parmaxi, Kostas Stylianou, and Panayiotis Zaphiris



Tea | 3:20 PM

Thursday, September 28 | 3:50 PM

Invited Talk (Professor B. Nag Auditorium)

Devdutt Pattanaik: Designing a 'Mahabharata for Children'—Challenges

Chair: Sugandh Malhotra



Adobe Sponsor Tutorial | 5:10 PM–6:10 PM



Campus Walk | 5:10 PM–6:10 PM



HCIPAI Member Meet | 5:30 PM



Conference Dinner at
Meluha The Fern, Powai | 7:00 PM

Friday, September 29 | 8:30 AM

Invited Talk (Professor B. Nag Auditorium)

Tom Gross: Towards Human-Centered Collaborative Computing
Chair: Anirudha Joshi

Session 7

Friday, September 29 | 9:40 AM

Session 7a: Multitouch interaction (Lecture Hall 21)

Chair: Panayiotis Zaphiris

Full Paper: An Observational Study of Simultaneous and Sequential Interactions in Co-located Collaboration
Shuo Niu, D. Scott McCrickard and Steve Harrison

Full Paper: Dynamic UI Adaptations for One-Handed Use of Large Mobile Touchscreen Devices
Daniel Buschek, Maximilian Hackenschmied, and Florian Alt

Full Paper: Horizontal vs. Vertical: How the Orientation of a Large Interactive Surface Impacts Collaboration in Multi-Surface Environments
Lili Tong, Aurélien Tabard, Sébastien George, and Audrey Serma

Full Paper: Investigating Notifications and Awareness for Multi-user Multi-touch Tabletop Displays
Shuo Niu, D. Scott McCrickard, and Steve Harrison

Session 7b: Aging and disabilities (Lecture Hall 22)

Chair: Helen Petrie

Full Paper: Age-related effects of task difficulty on the semantic relevance of query reformulations
Saraschandra Karanam, and Herre van Oostendorp

Full Paper: Could People with Stereo-deficiencies Have a Rich 3D Experience Using HMDs?
Sonia Cárdenas-Delgado, M.-Carmen Juan, Magdalena Méndez-López, and Elena Pérez-Hernández

Full Paper: How Older People Who Have Never Used Touchscreen Technology Interact with a Tablet
Roberto Menghi, Silvia Ceccacci, Francesca Gullà, Lorenzo Cavalieri, Michele Germani, and Roberta Bevilacqua

Full Paper: MeViTa: Interactive Visualizations to Help Older Adults with their Medication Intake using a Camera-Projector System
Robin De Croon, Bruno Cardoso, Joris Klerkx, Vero Vanden Abeele, and Katrien Verbert

Session 7c: Digital inclusion (Lecture Hall 23)

Chair: Indrani Medhi Thies

Short Paper: Contextualizing ICT based Vocational Education for Rural Communities: Addressing Ethnographic Issues and Assessing Design Principles
KP Sachith, Aiswarya Gopal, Alexander Muir, and Rao R Bhavani

Full Paper: Enhancing Access to eLearning for People with Intellectual Disability: Integrating Usability with Learning
Theja Kuruppu Arachchi, Laurianne Sitbon, and Jinglan Zhang

Full Paper: Identifying support opportunities for foreign students: Disentangling language and non-language problems among a unique population
Jack Jamieson, Naomi Yamashita, and Jeffrey Boase

Short Paper: PersonaBrowser Status Quo and Lessons learned from a Persona-Based Presentation Metaphor of WCAG
Alexander Henka, and Gottfried Zimmermann

Full Paper: Women in Crisis Situations: Empowering and Supporting Women through ICTs
Tara Capel, Dhaval Vyas, and Margot Brereton

Session 7d: Course (Lecture Hall 31)

Course C3 (1/2) : Designing and Assessing Interactive Systems Using Task Models
Célia Martinie, Philippe Palanque, and Marco Winckler (ICS-IRIT, University Paul Sabatier, France)

Session 7e: Industry presentations IV (Lecture Hall 32) **Chair: Rohit Ashok Khot**

Application of Conversational User Interfaces in Healthcare
Ami Sampat (SAP Labs, Bangalore)

Paradigm-Shifting Use-Cases for IoT
Reeta Mehrishi, and Astha Johri (Tata Consultancy Service)

Acting fast and slow online: What is the right suite of UX methodologies for each type of actions?
Saeideh Bakhshi (Facebook)

Session 7f: Pitney Bowes Design Challenge—Final Presentations (Lecture Hall 33) **Chair: Manish Sharma**



Tea | 11:00 AM

Session 8 **Friday, September 29 | 11:30 AM**

Session 8a: Pointing and target selection (Lecture Hall 21) **Chair: Nikolaos Avouris**

Full Paper: Dynamics of Pointing with Pointer Acceleration
Jörg Müller

Full Paper: How can Adding a Movement Improve Target Acquisition Efficacy?
Alexander R. Payne, Beryl Plimmer, Andrew McDavid, Andrew Luxton-Reilly, and T. Claire Davies

Short Paper: Information-Theoretic Analysis of Human Performance for Command Selection
Wanyu Liu, Olivier Rioul, Michel Beaudouin-Lafon, and Yves Guiard

Short Paper: One Fitts' Law, Two Metrics
Julien Gori, Olivier Rioul, Yves Guiard, and Michel Beaudouin-Lafon

Short Paper: Towards Pupil-Assisted Target Selection in Natural Settings: Introducing an On-screen Keyboard
Christoph Strauch, Lukas Greiter, and Anke Huckauf

Session 8b: Interaction with children (Lecture Hall 22) **Chair: Rama Vennelakanti**

Full Paper: An interactive elementary tutoring system for oral health education using an augmented approach
Mitali Sinha, and Suman Deb

Full Paper: Empowered and Informed: Participation of Children in HCI
Janet C Read, Matthew Horton, Daniel Fitton, and Gavin Sim

Full Paper: Gaze Awareness in Agent-Based Early-Childhood Learning Application
Deepak Akkil, Prasenjit Dey, Deepshika Salian, and Nitendra Rajput

Full Paper: Puffy: A Mobile Inflatable Interactive Companion for Children with Neurodevelopmental Disorder
Franca Garzotto, Mirko Gelsomini, and Yosuke Kinoe

Session 8c: Cultural differences and communication technology (Lecture Hall 23)
Chair: Gerrit van der Veer

Full Paper: A Confucian Look at Internet Censorship in China
Yubo Kou, Bryan Semaan, and Bonnie Nardi

Full Paper: A Cross-Cultural Noticeboard for a Remote Community: Design, Deployment, and Evaluation
Alessandro Soro, Margot Brereton, Jennyfer Lawrence Taylor, Anita Lee Hong, and Paul Roe

Full Paper: Culturally Informed Notions of Mobile Context Awareness - Lessons Learned from User-Centred Exploration of Concepts of Context and Context Awareness
Xiangang Qin, Chee-Wee Tan, Mads Bødker, Wei Sun, and Torkil Clemmensen

Full Paper: How do you want your chatbot?
An exploratory Wizard-of-Oz study with young, urban Indians
Indrani Medhi Thies, Nandita Menon, Sneha Magapu, Manisha Subramony, and Jacki O'Neill

Session 8d: Course (Lecture Hall 31)

Course C3 (2/2): Designing and Assessing Interactive Systems Using Task Models
Célia Martinie, Philippe Palanque, and Marco Winckler (ICS-IRIT, University Paul Sabatier, France)

Session 8e: Industry presentations V (Lecture Hall 32)
Chair: Naveen Bagalkot

Get a practical glimpse into the life-cycle of your shiny new product through research
Smitha Papolu (Citrix Systems)

Establishing Context: Designing for Intercultural and Intracultural Communication in Traditional Research Settings
Camela Logan, and Saide Bakhshi (Facebook)

Participatory and Interactive Installations as a Design Research Mechanism for Smart Cities
Reeta Mehrishi and Astha Johri (Tata Consultancy)

Session 8f: Field Trips Summary (Lecture Hall 33)
Chair: Debjani Roy



Lunch | 12:50 PM

Session 9
Friday, September 29 | 2:00 PM

Session 9a: Adaptive design and mobile applications (Lecture Hall 21)
Chair: Takahiro Miura

Short Paper: A Minimalist Approach for Identifying Affective States for Mobile Interaction Design
Subrata Tikadar, Sharath Kazipeta, Chandrakanth Ganji, and Samit Bhattacharya



Full Paper: Automatic Generation of User Interface Layouts for Alternative Screen Orientations
Clemens Zeidler, Gerald Weber, Wolfgang Stuerzlinger, and Christof Lutteroth

Full Paper: Defining Gestural Interactions for Large Vertical Touch Displays
Robin Andersson, Jonas Berglund, Aykut Coşkun, Morten Fjeld, and Mohammad Obaid


Short Paper: MyCarMobile: A travel assistance emergency mobile app for deaf people
Tânia Rocha, Hugo Paredes, Diogo Soares, Benjamim Fonseca, and João Barroso

Short Paper: Touch Shadow Interaction and Continuous Directional User Interface for Smartphone
Sanjay Ghosh, Joy Bose, Rajkumar Darbar, and Punyashlok Dash

Session 9b: Design rationale and camera-control (Lecture Hall 22)
Chair: Geraldine Fitzpatrick



Full Paper: Capturing Design Decision Rationale with Decision Cards
Marisela Gutierrez Lopez, Gustavo Rovelto, Mieke Haesen, Kris Luyten, and Karin Coninx

 **Full Paper:** Coping with Design Complexity: A Conceptual Framework for Design Alternatives and Variants
Judy Bowen, and Anke Dittmar

Short Paper: Identifying the Interplay of Design Artifacts and Decisions in Practice: A Case Study
Judy Bowen, and Anke Dittmar

Short Paper: On the Effects of Progressive Reduction as Adaptation Strategy for a Camera-based Cinematographic User Interface
Axel Hoesl, Mujo Alic, and Andreas Butz

Full Paper: You've Got the Moves, We've Got the Motion—Understanding and Designing for Cinematographic Camera Motion Control
Axel Hoesl, Partrick Mörwald, Philipp Burgdorf, Elisabeth Dreßler, and Andreas Butz

Session 9c: Panels (Lecture Hall 23)

Panel 3: Interactive Panel: Designing with Culture in Mind

Panelists

Jose Abdelnour-Nocera, University of West London, UK and Madeira Interactive Technologies Institute, Portugal

Torkil Clemmensen, Copenhagen Business School, Copenhagen, Denmark

Jack Jamieson, University of Toronto

Florian Lachner, University of Munich (LMU), Munich, Germany

Dorina Rajanen, University of Oulu, Oulu, Finland

Pradeep Yammiyavar, IIT Guwahati, India

Session 9d: Course (Lecture Hall 31)

Course C6: Introduction to Service Design for Digital Health
Ashley Colley, and Henna Marttila
(University of Lapland, Finland)

Session 9e: Case studies of HCI in organizations (Lecture Hall 32)

Chair: Sachin Patil

A Digital Employability Marketplace
Ojas Vyas, and Karan Rai Bahadur

Adoption of Structural Analysis Capabilities in an IOT based Scenario for Connected Assets
Sparshad Kasote, Suvodeep Das, and Santhosh Rao

Connected by Design - Our learnings from designing digital profiler journeys IDFC Bank Digital Experience
Debasish Biswas, Nihal Pimpale, and Konark Ashara

Design guidelines for exploring relationships in a connected big data environment
Jaison Jacob, and Santhosh Rao

Session 9f: Workshops Summary (Lecture Hall 33)

Chairs: Torkil Clemmensen, Venkatesh Rajamanickam



Tea | 3:20 PM

Friday, September 29 | 3:50 PM

Closing Keynote (Professor B. Nag Auditorium)

Matt Jones: Weaving New Mobile UX Futures through Integrated Innovation across 3 Continents, 4 Countries and a Diversity of Perspectives

Chair: Jan Gulliksen



Installations, Demonstrations, and Interactive Posters

Installations (See maps on pages 40–41)

Conversations and Things—The pattern maker

Reeta Mehrishi, Anindita Saha, and Astha Johri

Data Jalebi Bot

Gaurav Patekar, Himanshu Bablani, and Karan Dudeja

Depth Data Visualization using Kinect and Processing

Katyayani Singh, and Priyanka Rai

Insight-Out: Shaping Our World of Ideas

Chitra Chandrashekhar, Lakshmi Deshpande, Chinmayee Samant, Himanshu Goyal, and Rohit Soni

Project Air Draw

Prabhat Mahapatra, and Nikhil Tailang

Snakes and Ladders: A Sonification

Hanif Baharin

Tick Tock

Yash Chandak

Who you are is what you get—A reflection on search and information gathering

Rohit Gupta

Demonstrations (See maps on pages 40–41)

Little Bear—A Gaze Aware Learning Companion for Early Childhood Learners

Deepak Akkil, Prasenjit Dey, and Nitendra Rajput

Inclusive Side-scrolling Action Game Securing Accessibility for Visually Impaired People

Masaki Matsuo, Takahiro Miura, Masatsugu Sakajiri, Junji Onishi, and Tsukasa Ono

ReRide A Platform to Explore Interaction with Personal Data Before, During, and After Motorcycle Commuting

Naveen Bagalkot, Tomas Sokoler, Riyaj Shaikh, Gaurav Singh, Anders Edelbo Lillie, Pratiksha Dixit, Aditi Rai, Chakravarthy Vignesh, and Ashwin Senthil

Coaching Compliance: A Tool for Personalized e-Coaching in Cardiac Rehabilitation

Supraja Sankaran, Mieke Haesen, Paul Dendale, Kris Luyten, and Karin Coninx

SoPhy: Smart Socks for Video Consultations of Physiotherapy

Deepti Aggarwal, Thuong Hoang, Weiyi Zhang, Bernd Ploderer, Frank Vetere, and Mark Bradford

Interactive Posters (See maps on pages 40–41)

BendSwipe: One Handed Target Zooming for Flexible Handheld Display

Keyur Sorathia, Aditi Singh, and Mayank Chhabra

Crowdsourcing of Accessibility Attributes on Sidewalk-based Geodatabase

Michaela Riganova, Jan Balata and Zdenek Mikovec

Dual-Mode User Interfaces for Web based Interactive 3D Virtual Environments Using Three.js

Matthew Stanton, Thomas Hartley, Fernando Loizides, and Adam Worrallo

Fine-grained Privacy Setting Prediction using a Privacy Attitude Questionnaire and Machine Learning

Frederic Raber, Felix Kosmalla, and Antonio Krueger

Interactive Reading Using Low Cost Brain Computer Interfaces

Fernando Loizides, Liam Naughton, Paul Wilson, Michael Loizou, Shu-fan Yang, Thomas Hartley, Adam Worrallo, and Panayiotis Zaphiris

Investigating Control of Virtual Reality Snowboarding Simulator Using a Wii FiT Board

Rhiannon Wood, Fernando Loizides, Thomas Hartley, and Adam Worrallo

Pragati - A Mobile Based Virtual Reality (VR) Platform to Train and Educate Community Health Workers

Keyur Sorathia, Kshipra Sharma, Shimmila Bhowmick, and Preetham Kamidi

Shifting from the Children to the Teens' Usability: Adapting a Gamified Experience of a Museum Tour

Vanessa Cesário, Marko Radeta, António Coelho, and Valentina Nisi

TTracker: Using Finger Detection to Improve Touch Typing Training

Elvin Kollie, Fernando Loizides, Thomas Hartley, and Adam Worrallo

URetail: Privacy User Interfaces for Intelligent Retail Stores

Frederic Raber, and Nils Vossebein

Versatile Classroom Management Solution for Teachers in Developing Countries

Muhammad Zahid Iqbal

Social Events at INTERACT 2017



Gateway of India, Mumbai (Image Credit: Rahul Manoharan)

(Top) Mumbai Darshan

September 24, 25, 26 & 30 | 8 AM–6 PM

For participants of INTERACT 2017, we are organizing one-day Mumbai guided tours called “Mumbai Darshan”. A professional guide will accompany each tour. In addition, a student volunteer will also be present.

(Below) Freshie’s Night

September 25 | 6:00 PM–7:30 PM

Come get introduced to the conference. Find out more about the conference programme, mingle with INTERACT veterans or just meet new people.



Delegates during the Welcome Reception at INTERACT 2015 Bamberg



Dancers dressed to dance for the Navratri festival (Image credit: Flickr/Restless mind)

(Top) Dandia Night

September 27 | 6:30 PM

INTERACT 2017 falls during the time of Navratri, the festival of dance in the praise of Goddess Durga. It is a wonderful opportunity for the participants of the conference to seep themselves in the spirited activities and soak in the culture and joy of Navratri.

(Below) Conference Dinner

September 28 | 7:00 PM–9:00 PM



Meluha The Fern, Powai, Mumbai (Image Credit: www.meluhafernhotel.com)



Chairs

General Chairs

Anirudha Joshi (IDC, IIT Bombay, India)
Girish Dalvi (IDC, IIT Bombay, India)

Keynotes and Invited Talks Chair

Philippe Palanque (IRIT, France)

Full Papers Chairs

Regina Bernhaupt (Ruwido, France)
Jacki O'Neill (Microsoft Research, India)

Workshops Chairs

Torkil Clemmensen
(Copenhagen Business School, Denmark)
Venkatesh Rajamanickam (IDC, IIT Bombay, India)

Field Trips Chairs

Nimmi Rangaswamy (Xerox, India)
Jose Abdelnour Nocera (University of West London, UK)
Debjani Roy (Mumbai, India)

Short Papers Chair

Peter Forbrig (University of Rostock, Germany)
Sriganesh Madhvanath (PARC, USA)

Demonstrations Chairs

Takahiro Miura (University of Tokyo, Japan)
Shengdong Zhao
(National University of Singapore, Singapore)
Manjiri Joshi (IDC, IIT Bombay, India)

Posters Chairs

Girish Prabhu (Srishti Labs, India)
Zhengjie Liu (Dalian Maritime University, China)

Doctoral Consortium Chairs

Paula Kotze (CSIR Meraka Institute, South Africa)
Pedro Campos (Madeira Interactive Technologies
Institute, Portugal)

Student Research Consortium Chairs

Indrani Medhi Thies (Microsoft, India)
Naveen Bagalkot (Srishti Labs, India)
Janet Wesson (Nelson Mandela Metropolitan University,
South Africa)

Student Design Consortium Chairs

Abhishek Shrivastava (IIT Guwahati, India)
Prashant Sachan (Trell, India)
Arnab Chakravarty (Philips Design, India)

Installations Chairs

Ishneet Grover (Samsung, India)
Jayesh Pillai (IDC, IIT Bombay, India)
Nagraj Emmadi (TCS, India)

Courses Chairs

Gerrit van der Veer
Dhaval Vyas
(Queensland University of Technology, Australia)

Case Studies Chairs

Ravi Poovaiah (IDC, IIT Bombay, India)
Elizabeth Churchill (Google, USA)

Industry Presentations Chairs

Suresh Chande (Microsoft, Finland)
Fernando Loizides (University of Wolverhampton, UK)

Panel Chairs

Antonella De Angeli (University of Trento, Italy)
Rosa Arriaga (Georgia Tech, USA)

Technical Program Chair

Marco Winckler (IRIT, France)

Proceedings Chairs

Marco Winckler (IRIT, France)
Devanuj (IDC, IIT Bombay, India)

Web and Social Media Chair

Naveed Ahmed (Adobe Systems, India)

Student Volunteer Chairs

Rasagy Sharma (Mapbox, India)
Jayati Bandyopadhyay (Conduent Labs, India)

Sponsorship Chair

Atul Manohar (Informatica, India)

Venue Arrangements Chair

Sugandh Malhotra (IDC, IIT Bombay, India)

Travel Arrangements Chair

Rupesh Nath (IDC, IIT Bombay)

Childcare Club Chairs

Atish Patel
Susmita Sharma (IDC, IIT Bombay, India)

Accessibility Chairs

Prachi Sakhardande (Microsoft India R&D, India)
Sonal Joshi (TCS, India)

Food and Social Events Chair

Rucha Tulaskar (Mumbai, India)

INTERACT 2019

The 18th IFIP TC.13 International Conference
on Human-Computer Interaction

2-6 SEPTEMBER 2019 / PAPHOS - CYPRUS

The 18th IFIP TC.13 International Conference on Human-Computer Interaction - INTERACT 2019 will be held from 2 - 6 September, 2019 in Paphos, Cyprus.

INTERACT conferences are an important platform for researchers and practitioners in the field of human-computer interaction (HCI) to showcase their work. Over the years, the conferences have attracted researchers from several countries and cultures.

www.interact2019.org



INDIA HCI 2018

Bangalore

December 2018



Beyond & Behind the Screen

On one hand the screen is getting smaller, and on the other the underlying technology driving screen based interaction is getting larger and complex. Algorithms, Machine Learning, and Artificial Intelligence are driving most of our day-to-day interaction with digital technology. Furthermore, digital technology is also made available in modes that do not need a screen to interact with. Tangible, physical, audio and aural modes of interacting are becoming more pervasive.

We will explore this foundational shift at
INDIA HCI 2018,
Bangalore.

The hi-tech city of gardens.

Conference Host



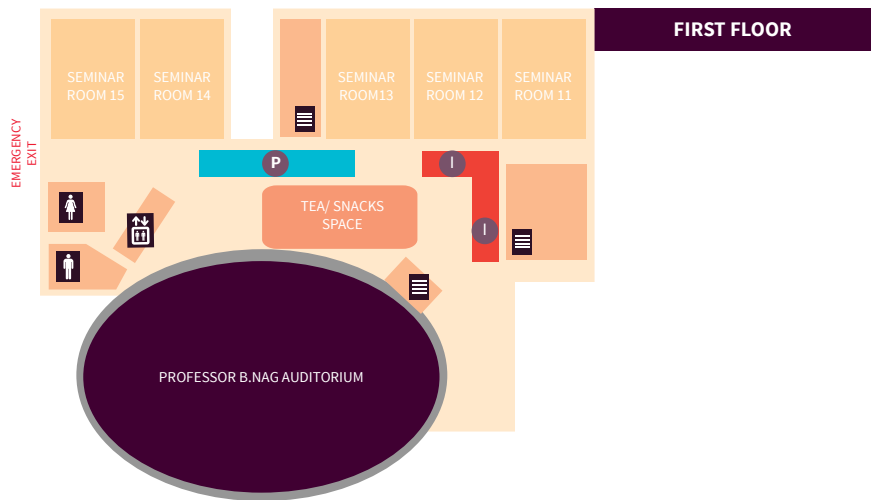
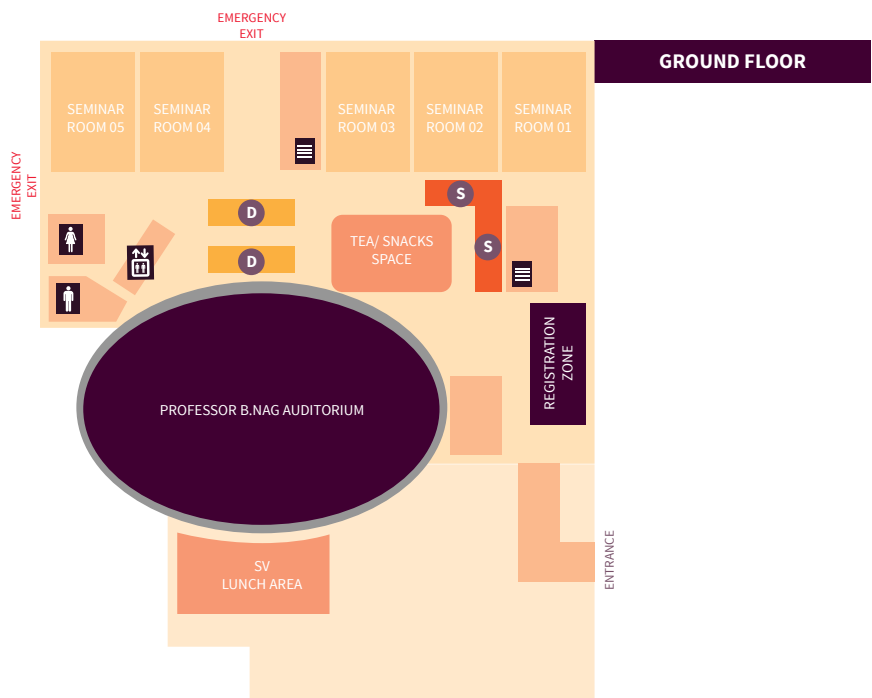
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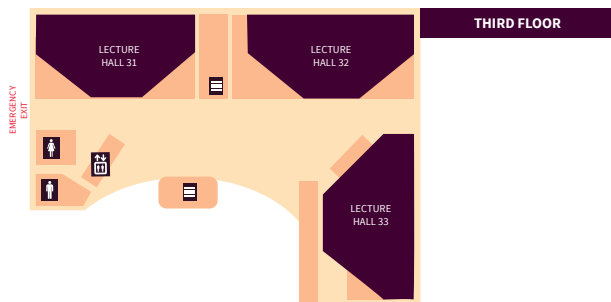
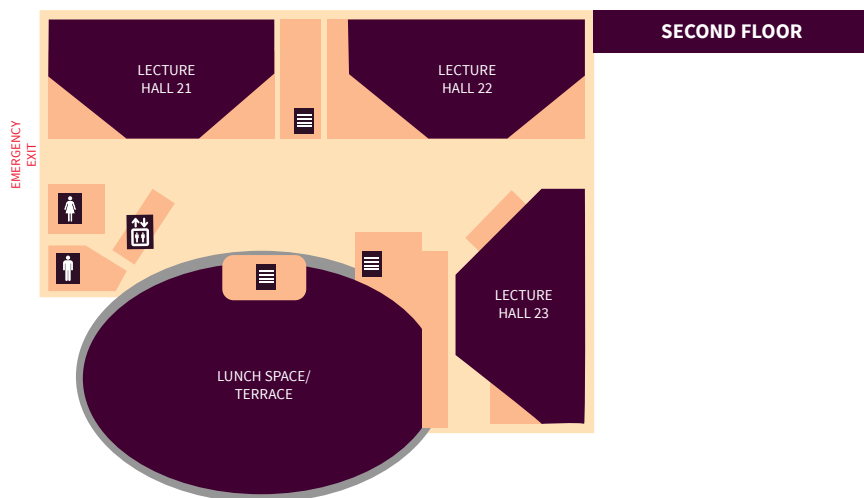
Institute of Art, Design and Technology













Venue Map: VMCC, IIT Bombay





- | | | | |
|---|------------------|---|----------------|
|  | WOMEN'S RESTROOM |  | DEMONSTRATIONS |
|  | MEN'S RESTROOM |  | INSTALLATIONS |
|  | ELEVATOR |  | POSTERS |
|  | STAIRCASE |  | STALLS |





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