

International Conferences
IHCI, GET, CGVCVIP, BigDaCI & TPMC
2016

FINAL CONFERENCE PROGRAM

Saturday, 2nd July 2016

08:00-19:10 Welcome Desk

09:45-10:00 Session O – Opening Session
(Room Funchal)

10:00-11:00 Session KL1 – Keynote Presentation
(Room Funchal)

HUMAN COMPUTER INTERACTION AND SOCIETAL IMPACT – CAN HCI INFLUENCE PUBLIC POLICY MAKING AND IT POLITICS?

By Professor Jan Gulliksen, KTH Royal Institute of Technology, Sweden

11:00-11:30 Coffee Break

11:30-12:50 Session FSP 2.1 – (IHCI 2016)
Creativity Support Systems // Participatory Design and Cooperative Design Techniques
(Room Funchal)

Chair: Jan Gulliksen

WHEN DESIGNERS ARE NON-DESIGNERS: OPEN ENDEDNESS VS. STRUCTURE OF DESIGN TOOLS (F043)

Alma Leora Culén, Andrea Gasparini, Pavla Minaříková, Roman Novotný, Sumit Pandey and Ladislava Zbiejczuk Suchá

MODELS AS BRIDGES FROM DESIGN THINKING TO ENGINEERING (F054)

Hilda Tellioğlu

MUSICAL OBJECT (S033)

Francisco Lopes, Tiago Cruz and F. Amílcar Cardoso

11:30-13:10 Session FSP 2.2 – (BigDaCI 2016)

Big Data Algorithms and Architectures
(Room Paris)

Chair: Tamilla Mavlanova

PROFIT-BASED LOGISTIC REGRESSION TRAINED BY MIGRATING BIRDS OPTIMIZATION: A CASE STUDY IN CREDIT CARD FRAUD DETECTION (F020)

Azamat Kibekbaev and Ekrem Duman

TWITTER TEMPORAL EVOLUTION ANALYSIS: COMPARING EVENT AND TOPIC DRIVEN RETWEET GRAPHS (F004)

Giambattista Amati, Simone Angelini, Francesca Capri, Giorgio Gambosi, Gianluca Rossi and Paola Vocca

BRINGING HEALTHCARE ANALYTICS TO WHERE BIG DATA RESIDES USING A DISTRIBUTED QUERY SYSTEM (S022)

Shawn Murphy, Alyssa Goodson, Michael Mendis, Marykate Murphy, Lori Phillips, Yanbing Wang and Christopher Herrick

TECHNICAL FUNCTION DISCOVERY IN PATENT DATABASES FOR GENERATING INNOVATIVE SOLUTIONS (S001)

Dmitriy M. Korobkin, Sergey A. Fomenkov, Sergey G. Kolesnikov and Alexander B. Golovanchikov

13:00 – 14:30 Lunch Break

14:30-15:30 Session FRP 2.3 – (IHCI 2016)
Supporting user populations with Intellectual Disabilities
(Room Funchal)

Chair: Paul Lyons

A HAPTIC DISPLAY FOR THE SIMULATION OF SOFT TISSUE PALPATION IN CHAI3D (F003)

Jan Hergenhan and Heinz Wörn

HUMAN ACTIVITY RECOGNITION IN AMBIENT ASSISTED LIVING FOR ALZHEIMER'S PATIENT: A REVIEW OF TRENDS AND CHALLENGES IN MALAYSIA (R011)

Nur Waheeda Basharudin and Ku Nurul Fazira Ku Azir

14:30-16:40 Session FSP 2.4 – (CGVCVIP 2016)

Computer Graphics // Other

(Room Sidney)

Chair: Liming Zhang

A SOFTWARE FRAMEWORK FOR THE DEVELOPMENT OF PROJECTION-BASED AUGMENTED REALITY SYSTEMS (F007)

Marc Sunet, Marc Comino, Dimosthenis Karatzas, Antoni Chica and Pere-Pau Vázquez

COMPARING MESHES - A VOLUME BASED APPROACH (F023)

Ralph Erdt and Peter Dannenmann

ENHANCED MAGNIFICATION FOR REDUCED MOVEMENT IN VIRTUAL REALITY ENVIRONMENTS (F011)

Eva Monclús, Isabel Navazo and Pere-Pau Vázquez

LOCAL THICKNESS COMPUTATION IN 3D MESHES AND 3D PRINTABILITY ASSESSMENT (S075)

Celestin Lanterne, Stefka Gueorguieva and Pascal Desbarats

AN SEMI-AUTOMATIC APPROACH FOR FAST STATISTICAL DATA EXTRACTION FROM AORTIC VALVE (S072)

Aleksandrs Sisojevs, Rihards Starinskis and Pēteris Stradiņš

14:30-15:30 Session FP 2.5 – (TPMC 2016)

Networking Protocols // Other

(Room Paris)

Chair: Jean-Pierre KUILBOER

MUTUAL AUTHENTICATION PROTOCOL FOR SECURE NFC BASED MOBILE HEALTHCARD (F018)

Divyashikha Sethia, Daya Gupta, Huzur Saran, Rishabh Agrawal and Amogh Gaur

IBGP SOLUTION BY COMBINING ROUTE REFLECTION AND SHARED TREE BASED MULTICAST (F011)

Toshihiko Kato, Yao Koffi Hubert Wilfried, Celimuge Wu and Satoshi Ohzahata

15:30-16:30 Session KL2 – Keynote Presentation

(Room Funchal)

VISUALIZATION AND DATA MINING FOR HIGH DIMENSIONAL DATA

By Professor Alfred Inselberg, Senior Fellow San Diego Supercomputing Center & Computer Science and Applied Mathematics Departments, Tel Aviv University, Israel

16:30-17:00 Coffee Break

17:00-18:40 Session FSP 2.6 – (IHCI 2016)

HCI and Design Education // User Studies and Fieldwork

(Room Funchal)

Chair: Till Halbach

‘SIMON SAYS’ “USE HUMANOID ROBOT TO TEACH CHILDREN” – A CASE STUDY OF EXPECTATIONS AND REALITY (F027)

Kaberi Naznin, Vivienne Farrell, Karola von Baggo and Clinton Woodward

AN INVESTIGATION OF VISUAL APPEAL AND TRUST IN WEBSITES (F022)

Marian McDonnell and Alex Lee

THE MULTIMODAL EDGE OF HUMAN AEROBOTIC INTERACTION (S007)

Ayodeji Opeyemi Abioye, Stephen D. Prior, Glyn T. Thomas and Peter Saddington

TECHNOLOGY IN THE CLASSROOM: A PILOT TEST WITH A HUMANOID ROBOT (S056)

Kaberi Naznin, Vivienne Farrell, Karola von Baggo and Clinton Woodward

17:00-19:10 Session FSP 2.7 - (CGVCVIP 2016)

Computer Vision

(Room Sidney)

Chair: Peter Dannenmann

PSEUDO-DENSE OPTICAL FLOW BASED ON PUZZLED IMAGES (F042)

Olivier Demuyne

ULTRA-LOW-LATENCY AUTOMATIC ENDOSCOPIC IMAGE ORIENTATION STABILISATION (F069)

Wiebe Van Ranst, Toon Goedemé and Joost Vennekens

THE MOBILE ROBOT NAVIGATION METHOD BASED ON ONBOARD SENSORS AND CAMERA DATA FUSION (F039)

Vladimir Filaretov, Aleksandr Novitsky and Dmiry Yukhimets

KINECT BASED 3D VIDEO GENERATION (S056)

Liming Zhang, Jun Lan, Hanxiang Yin, Guibo Luo and Yuesheng Zhu

CONTOUR SMOOTHING ALGORITHM BASED ON CONTOUR EXTREMES (S041)

Oleksandr V. Koriukalov and Vasyl M. Tereshchenko

19:15 Welcome Cocktail

Sunday, 3rd July 2016

08:30-15:45 Welcome Desk

09:00-11:00 Session FP 3.1 – (IHCI 2016)

HCI and Design education

(Room Sidney)

Chair: *Hilda Tellioglu*

COMPUTATIONAL PRODUCTION OF COLOUR HARMONY. USING A GENETIC ALGORITHM (F009)

Paul Lyons and Giovanni Moretti

ASPECT ORIENTATION AS A NEW APPROACH FOR CONTEXT DEPENDENT HMI ADAPTATION (F037)

Sebastian Heinze, Jens Ziegler, Markus Graube and Leon Urbas

ECO-A: CHILDREN'S ENGAGEMENT IN ENVIRONMENTAL AND CLIMATE ISSUES (F047)

Alma Leora Culén, Ingeborg Eilertsen, Lone Lægroid, Sumit Pandey, Magnus Søyland and Ingrid Smørgrav Viddal

DESIGNING FOR TECHNOLOGY ENABLED CONSTRUCTIVISM LEARNING: EXPLORING A MANGROVE FOREST BIOME (F029)

Kaberi Naznin, Vivienne Farrell and Karola von Baggo

09:00-11:00 Session FP 3.2 – (BigDaCI 2016)

Big Data Applications // Data Mining Applications

(Room Paris)

Chair: *Ajith Abraham*

THE ROLE OF DATA ASSETS IN THE ORGANIZATIONAL SUCCESS (F007)

Stanislav Mamonov and Tamilla Mavlanova

BIG DATA ANALYTICS IN THE PUBLIC SECTOR: A CASE STUDY OF NEET ANALYSIS FOR THE LONDON BOROUGHES (F018)

Daqing Chen, Babatunde Asaolu and Chao Qin

FACTORING THE HABITS: COMPARING METHODS FOR DISCOVERING BEHAVIOR PATTERNS FROM LARGE SCALE

ACTIVITY DATASETS (F016)

Onur Yürüten and Pearl Pu

PREDICTING MORTGAGE DEFAULT: LESSONS FROM DATA MINING FANNIE MAE MORTGAGE PORTFOLIO (F006)

Stanislav Mamonov and Raquel Benbunan-Fich

11:00-11:30 Coffee Break

11:30-13:00 Session FP 3.3 – (IHCI 2016)

Measurement of success of Emotional Technology / Interfaces // Supporting User Populations With Physical Disabilities

(Room Sidney)

Chair: *Hilda Tellioglu*

REFLECTIONS ON COST-BENEFIT ANALYSES CONCERNING UNIVERSAL DESIGN OF ICT SOLUTIONS (F010)

Till Halbach and Kristin Skeide Fuglerud

THE ROLE OF MATERIALS IN DESIGN OF FAMILIAR AND CONTEXTUAL ASSISTIVE TECHNOLOGIES (F042)

Suhas Govind Joshi and Heidi Bråthen

INVOLVING SENIORS IN THE DESIGN OF HOME-BASED WELFARE TECHNOLOGIES: A REVIEW OF EXISTING RESEARCH (F045)

Rune B. Rosseland

11:30-12:50 Session FSP 3.4 - (CGVCVIP 2016)

Image Processing

(Room Paris)

Chair: *Pere-Pau Vázquez*

A COMPARATIVE STUDY OF COMPUTERIZED APPROACHES FOR TYPE P63 OVARIAN TISSUES USING HISTOPATHOLOGY DIGITIZED COLOR IMAGES (F035)

T. M. Shahriar Sazzad, Leisa Armstrong and Amiya Kumar Tripathy

ACCURATE BACKGROUND POINTS DETECTION FOR ACTION RECOGNITION IN PRACTICAL VIDEO DATASETS (F059)

Yu Xiang, Yoshihiro Okada and Kosuke Kaneko

VISUAL DEFICIENCIES OF DIGITIZED ANALOG VIDEO - A STUDY OF A VIDEO HOME SYSTEM (VHS) ARCHIVE (S061)

Stefanie Müller and Maximilian Eibl

13:00 – 14:30 Lunch Break

14:30-15:10 Session SP 3.5 - (CGVCVIP 2016)

Pattern Recognition in Computer Vision

(Room Sidney)

Chair: Dirk Berndt

SOLVING THE TASK OF FACE RECOGNITION IN CASES OF INSUFFICIENT TRAINING SET (S024)

Olga Krutikova and Aleksandrs Glazs

POINT CLOUD REGISTRATION WITH SURFACE DESCRIPTORS (S048)

Luis Gerardo de la Fraga and Daniel López-Escogido

14:30-15:30 Posters Session

(Room Lisboa)

Chair: Ajith Abraham

AN EYE TRACKER STUDY TO DETERMINE IF A CONSISTENT WEB PAGE LAYOUT IMPROVES USER PERFORMANCE

Gautham Mamidi and Ratvinder Grewal

A LOGO DESIGN TOOL BASED ON PROCEDURAL MODELING OF DESIGN ELEMENTS

Hyoji Ha, Hyunwoo Han, Sungyun Bae and Kyungwon Lee

AN EXPLORATORY GAME BASED ON SEMANTICS TO IMPROVE HISTORY LEARNING

Omar Gustavo Bravo-Quezada, Martín López-Nores and José Juan Pazos-Arias

THE RESEARCH ON ELECTRONIC COMPUTER GAMES AS A RECREATIONAL ACTIVITY IN TURKEY

Süleyman Munusturlar and Müge Akyıldız Munusturlar

MASTERBLIND - TESTING THE USABILITY OF AUDITORY FEEDBACK IN A COMPUTER GAME FOR BLIND PEOPLE

Ana Rita Teixeira, Ana Carvalhal, Filipe Abrantes, Vladimiro Lourenço, Anabela Gomes and João Orvalho

VECTOR FIELD RBF INTERPOLATION ON A SPHERE

Michal Smolik and Vaclav Skala

E-LEARNING MULTIMODAL SYSTEM FOR TEACHING AND LEARNING PROGRAMMING

Ana Rita Teixeira, Anabela Gomes and João Orvalho

THE INTERNET OF THINGS ARCHITECTURE AND IMPEDED SECURITY

Jean-Pierre KUILBOER and Noushin Ashrafi

14:30-15:40 Session FSP 3.6 – (TPMC 2016)

Algorithms // Security

(Room Paris)

Chair: Noushin Ashrafi

AN ADAPTIVE HYBRID GENETIC ALGORITHM FOR PAVEMENT MANAGEMENT (F004)

João Santos, Adelino Ferreira and Gerardo Flintsch

RESPONSE TO SECURITY THREATS: APPRAISAL OF PROTECTION AND AVOIDANCE ACTIONS (S005)

Noushin Ashrafi, Jean-Pierre KUILBOER and One-Ki (Daniel) Lee

APPLYING EQUIVALENCE ALGORITHMS IN SOLVING PATTERN MATCHING PROBLEMS. CASE STUDY FOR EXPERT SYSTEM DESIGN (S013)

Alina Andreica

15:45 – Conference Tour and Dinner

Monday, 4th July 2016

08:30-13:30 Welcome Desk

09:20-11:00 Session FSP 4.1 – (GET 2016)

Game and Entertainment Technologies

(Room Lisboa)

Chair: *Alma Leora Culén*

GNOME TRADER: A LOCATION-BASED AUGMENTED REALITY TRADING GAME (F005)

Fabio Zünd, Miriam Tschanen, Marcel Lancelle, Maria Olivares, Mattia Ryffel, Alessia Marra, Milan Bombsch, Markus Gross and Robert W. Sumner

WHO'S IN MY GAME?: OTHER PLAYERS IN THE SINGLE-PLAYER SPACECHEM (F008)

Nicolás López Coombs

VIRTUAL-REALITY BASED LEISURE EXPERIENCE OF NINTENDO WII FOR ELDERLY (S018)

Muge Akyildiz Munusturlar and Suleyman Munusturlar

THE VIRTUAL REALITY: INTERFACE WITH TECHNOLOGY, DIGITAL GAMES AND INDUSTRY (S001)

Pablo Gobira and António Mozelli

09:30-11:00 Tutorial - 1st Part

(Room Paris)

COMPUTATIONAL INTELLIGENCE IN DATA MINING

By Professor Ajith P. Abraham, Machine Intelligence Research Labs (MIR Labs), USA

11:00-11:30 Coffee Break

11:30-12:50 Session FSP 4.2 - (CGVCVIP 2016)

Visualization

(Room Lisboa)

Chair: *Peter Dannenmann*

A NEW RADIAL BASIS FUNCTION APPROXIMATION WITH REPRODUCTION (F015)

Zuzana Majdisova and Vaclav Skala

INTERACTIVE VISUALIZATION OF MASSIVE 3D POINT CLOUDS (F029)

Jörg Futterlieb, Christian Teutsch and Dirk Berndt

A MODERN VISUAL GRAPHIC SEARCH HOMEPAGE (S010)

Xin Bai, Dawn Wang and Huizhen Ji

11:30-12:30 Session Tutorial - 2nd Part

(Room Paris)

COMPUTATIONAL INTELLIGENCE IN DATA MINING

By Professor Ajith P. Abraham, Machine Intelligence Research Labs (MIR Labs), USA

12:50 Best Paper Awards Ceremony and Closing Session

(Room Lisboa)