

**International Conferences on
Interfaces and Human Computer Interaction (IHCI),
Game and Entertainment Technologies (GET) &
Computer Graphics, Visualization, Computer Vision and Image Processing
(CGVCVIP)
2015
CONFERENCE PROGRAM**

Wednesday 22nd, July 2015

08:15-16:45 Welcome Desk

**09:45-10:00 Session O – Opening Session
(Room 21)**

OPENING SESSION

Profs. Yingcai Xiao and Katherine Blashki

**10:00-11:00 Session KL1 – Keynote Presentation
(Room 21)**

**GAME OVER? NEW APPROACHES TO TEACHING
ENGINEERING COURSES**

*Professor Joaquim Jorge, Department of Computer Science and
Engineering, IST – Técnico Lisboa, Portugal*

11:00-11:30 Coffee Break

**11:30-13:00 Session FP 22.1
Immersiveness and Engagement
(Room 21)**

Chair: Hisashi Sato

**BETWEEN THE VIRTUAL AND THE PHYSICAL:
MENTAL-EMOTIONAL EXPERIENCES OF SPACE IN
DIGITAL GAMES AND VIRTUAL WORLDS (F013)**

Samuel Gallastegui

**TOWARDS LUDOACOUSTIC IMMERSION PERSPECTIVES
ON TRANSCENDING THE VIRTUAL AND THE REAL OF
FUNCTIONAL SOUND AND MUSIC IN INTERACTIVE
MEDIA (F021)**

Hans-Peter Gasselseder

**A COMPARISON OF IMMERSION BETWEEN PLAYERS
PLAYING THE SAME GAME WITH AND WITHOUT
GRAPHICS (F043)**

Henrik Engström, Jenny Brusck and Per Anders Östblad

**11:30-12:45 Session FSRP 22.2
Visualization // Other
(Room 24)**

Chair: Yingcai Xiao

**INFORMATION-ENTROPY BASED LOAD BALANCING IN
PARALLEL ADAPTIVE VOLUME RENDERING (F023)**

Huawei Wang, Zhiwei Ai and Yi Cao

**REAL-TIME VISUALIZING MULTI-FIELD SIMULATION
DATA IN EARTH CLIMATE SCIENCE (F025)**

Yi Cao, Zeyao Mo, Zhiwei Ai, Huawei Wang and Li Xiao

**VISUALISATIONS AND THEIR EFFECT ON COGNITIVE
BIASES IN THE CONTEXT OF CRIMINAL INTELLIGENCE
ANALYSIS (R063)**

*Eva-Catherine Hillemann, Alexander Nussbaumer and
Dietrich Albert*

13:00 – 14:30 Lunch Break

**14:30-15:15 Invited Talk
(Room 21)**

HCI FOR THE NEXT BILLIONS

*Nitendra Rajput, Senior Researcher & Research Manager, IBM
Research, India*

15:20-16:35 Session FSP 22.3

**Computer Vision // Visualization // Other
(Room 24)**

Chair: Kenichi Sugihara

**MULTI-BOUNDARY SHAPE RETRIEVAL BASED ON A
NEW CLASS OF MOMENT FUNCTIONS (F035)**

Ruixia Song, Xiaochun Wang, Yena Wang and Mei Gu

**THICK MESH CONSTRUCTION FROM SCATTERED
CLOUD (F058)**

Thierry Bay and Romain Raffin

**EXTRACTING PUPIL CONTOUR WITH HOUGH
TRANSFORM OF CONNECTED COMPONENT
BOUNDARIES (S013)**

Ivan A. Matveev, Nikolay N. Chinaev and Vladimir P. Novik

15:20-16:50 Session FSP 22.4

Usability

(Room 21)

Chair: Nadiya Slobodenyuk

**USABILITY EVALUATION ON A NEW WINDOW
OPERATION INTERFACE BY FINGER GESTURE ABOVE
A KEYBOARD (F074)**

Junmock Lee, Tsutomu Terada and Masahiko Tsukamoto

**USER EXPERIENCE OF DIGITAL DIORAMAS FOR
INTERACTIVE WHITEBOARD (F037)**

*Carlo Emilio Standoli, Fiammetta Costa, Alessandra Mazzola,
Sabrina Muschiato and Daniela Zambarbieri*

**CHANGING THE STRUCTURE OF A MOODLE COURSE -
A CASE STUDY (S025)**

Tom Drange and Joachim Kargaard

**BRAIN-COMPUTER INTERFACE APPROACH TO
COMPUTER-AIDED DESIGN: ROTATE AND ZOOM
IN/OUT IN 3DS MAX VIA IMAGINATION (P062)**

*Yu-Chun Huang, Kuan-Lin Chen, Ming-Ying Wu, Ying-Wei Tu and
Scottie Chih-Chieh Huang*

Thursday 23rd, July 2015

08:30-15:45 Welcome Desk

09:00-11:10 Session FSP 23.1

The Value of Affective Interfaces / Systems / Application / Interaction

(Room 21)

Chair: *Gunver Majgaard*

HCI AND DESIGN THINKING: EFFECTS ON INNOVATION IN THE ACADEMIC LIBRARY (F042)

Alma L. Culén and Andrea A. Gasparini

A VIRTUAL KEYBOARD INTERFACE FOR HEAD-MOUNTED DISPLAY DEVICES (F050)

Yeonho Kim, Myungchul Sung and Daijin Kim

BRAIN COMPUTER INTERFACES FOR MOBILE APPS: STATE-OF-THE-ART & FUTURE DIRECTIONS (F019)

Sumit Soman, Siddharth Srivastava, Saurabh Srivastava and Nitendra Rajput

SIMULATION OF LOW-VISION EXPERIENCE BY USING A HEAD-MOUNTED VIRTUAL REALITY SYSTEM (S048)

Yohsuke Yoshioka

DEVELOPING OF EVALUATION METHOD OF MOTION REPEATABILITY BY MOTION CAPTURING (P079)

Macky Kato, Takeshi Sato and Yoshie Shimodaira

DEVELOPMENT OF MAINTENANCE-SUPPORTING IOT SYSTEM OF PLANT EQUIPMENT (P044)

Byung-Ju Lim, Chang-Dae Park and Kyung-Yul Chung

09:00-11:00 Session FSP 23.2

Image Processing // Other

(Room 24)

Chair: *Ivan Matveev*

APPLIED SEQUENTIAL-SEARCH ALGORITHM FOR COMPRESSION-ENCRYPTION OF HIGH-RESOLUTION STRUCTURED LIGHT 3D DATA (F037)

Mohammed M. Siddeq and Marcos A. Rodrigues

FPGA BASED IMPLEMENTATION OF A NOVEL IMAGE STEGANOGRAPHY ALGORITHM (F039)

Mina Zolfy Lighvan, Masoom Nazari, Vahid Dinevari, Ziaeddin Daie Koozehkonani and Ghader Karimian Khosroshahi

COMPUTER-AIDED TOOL FOR BREAST TUMOUR ANALYSIS PURPOSES (S031)

Guillermo Palacios-Navarro

IMAGE SAMPLING AND RECONSTRUCTION USING COMPRESSIVE SENSING (S018)

Guoqing Wu, Wengu Chen and Yi Cao

INTERACTIVE VISUALIZATION AND ANALYSIS OF EYE BIOMECHANICS (S065)

Iason Nikolas, Chris Papapavlou, Aris Lalos and Konstantinos Moustakas

11:00-11:30 Coffee Break

11:30-13:00 Session FSP 23.3

Social and cultural uses of/for Play // Tools and Technologies // Other

(Room 21)

Chair: *Tapani Liukkonen*

USING THE MPPA ARCHITECTURE FOR UCT PARALLELIZATION (F032)

Aline Hufschmitt, Jean Mehat and Jean-Noël Vittaut

PLUG: A ZIGBEE NETWORK FOR PLAYING UBIQUITOUS GAMES (S052)

Alexandre Topol, Jérôme Dupire and Viviane Gal

THE DEVELOPMENT OF A SENSORY GAME FOR ELDERLY PEOPLE UTILIZING PHYSICAL CONTACT (S027)

Shinnosuke Ide, Yumu Horii, Hisashi Sato and Takashi Nakamura

TOPOLOGICAL CLUES FOR PREDICTING OUTCOMES OF MULTIPLAYER ONLINE BATTLE ARENA GAMES (F029)

Dominik Deja and Mateusz Myślak

11:30-12:50 Session FSP 23.4

Computer Vision

(Room 24)

Chair: *Yingcai Xiao*

STATIC AND DYNAMIC OBJECT RECONSTRUCTION USING PHASE SHIFTING OF DE BRUIJN PATTERN (F062)

Matea Donlić, Tomislav Petković and Tomislav Pribanić

COMPARING THE PERFORMANCE OF RECOVERY ALGORITHMS FOR ROBUST FACE RECOGNITION (F011)

Sedigheh Ghofrani, Seyedramin Alikiaamiri and Mehran Khorasani

ROCK FALL SIMULATION USING 3D MODELS RECONSTRUCTED FROM MULTIPLE-VIEW IMAGES (S029)

Shogo Atsumi, Itaru Kitahara and Yuichi Ohta

13:00 – 14:30 Lunch Break

14:30-15:30 (Room 24)

H2020 EUROPEAN UNION RESEARCH PROJECTS

14:30-15:30 Doctoral Session

(Room 21)

Chair: *Yingcai Xiao*

BINAURAL SOUND ANALYSIS AND SPATIAL LOCALIZATION FOR THE VISUALLY IMPAIRED PEOPLE (D030)

Oana Bălan, Alin Moldoveanu and Florica Moldoveanu

SERIOUS GAME PATTERNS FOR SOCIAL INTERACTIONS (D045)

Barbara Reichart and Bernd Bruegge

15:45 – Conference Tour and Dinner

Friday 24th, July 2015

08:30-13:30 Welcome Desk

09:00-11:05 Session FSRP 24.1

Emotional Design issues / methods / experiences for novel interfaces // Participatory design and Cooperative design techniques
(Room 21)

Chair: Carlo Emilio Standoli

MULTIMODAL ROBOTS AS EDUCATIONAL TOOLS IN PRIMARY AND LOWER SECONDARY EDUCATION (F017)

Gunver Majgaard

TRANSITION CARDS: DESIGNING A CARD SORTING METHOD WITH AND FOR TEENAGE PATIENTS (F049)

Margaret Machniak Sommervold and Maja van der Velden

PARTICIPATIVE DEVELOPMENT OF TOUCHLESS USER INTERFACES: ELICITATION AND EVALUATION OF CONTACTLESS HAND GESTURES FOR ANESTHESIA (F088)

Daniel Künkel, Birgit Bomsdorf, Rainer Röhrig, Janko Ahlbrandt and Markus Weigand

GAMIFIED PLATFORM TO SUPPORT CHILDREN WITH OBESITY (S099)

Yeray del Cristo Barrios Fleitas, Carina Soledad González González, Eduardo Anibal Lalla Ruiz and Pedro Antonio Toledo Delgado

GAZE-EMBODIED AND GAZE-OFFLOADED COGNITION: IMPLICATIONS FOR GAZE-CONTROLLED INTERFACE DESIGN (R032)

Nadiya Slobodenyuk

13:00 Best Paper Awards Ceremony and Closing Session
(Room 21)

Profs. Yingcai Xiao and Katherine Blashki

11:00-11:30 Coffee Break

11:30-13:00 Session FSP 24.2

Serious Games and entertainment – applications, critiques
(Room 21)

Chair: Andrew Perkis

PERCEPTIONS OF THE ELDERLY USERS OF MOTION TRACKING EXERGAMES (F022)

Tapani N. Liukkonen, Tuomas Mäkilä, Hanna Ahtosalo, Toni Heinonen, Reetta Raitoharju and Paula Pitkäkangas

AN EFFICIENT METHOD FOR DESIGNING LEARNING GAMES FOR MATHEMATICS (S040)

Vani Kalloo, Permanand Mohan and Kinshuk

PLANTS VS ZOMBIES AS AN EMPOWERING LEARNING MACHINE (S011)

Gunver Majgaard

TOWARDS AN UPDATED TYPOLOGY OF NON-PLAYER CHARACTER ROLES (F034)

Henrik Warpefelt and Harko Verhagen

11:30-13:00 Session FP 24.3

Computer Graphics
(Room 24)

Chair: Sedigheh Ghofrani

EXTREME ASSET SIMPLIFICATION AND THE PRESERVATION OF VISUAL APPEARANCE (F034)

Jonas El Sayeh Khalil, Ignace Saenen, Peter Lambert and Rik Van de Walle

AUTOMATIC GENERATION OF 3D BUILDING MODELS BY BUILDING POLYGONS ORTHOGONALIZATION (F053)

Kenichi Sugihara and Zhen-Jiang Shen

PATH CACHING IN REAL-TIME STRATEGY GAMES (F045)

Ignace Pieter Saenen, Jonas El Sayeh Khalil, Peter Lambert and Rik Van de Walle