Program

2012 IEEE Symposium on Visual Languages and Human-Centric Computing
September 30 – October 4, 2012
Innsbruck, Austria
Final Program

Symposium at a Glance

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Addresses and Places

The Registration desk will be at the Europa Foyer - Ground Floor.
The coffee breaks and lunches will be at the Kristall Foyer - First Floor.

The Welcome Reception will be at the Hotel Grauer Bär - Universitätsstrasse 5-7.
The Conference Dinner will be at the Stiftskeller Restaurant - Stiftgasse 1.
Sunday, September 30

09.00 Graduate Consortium
Room: Hall Maximilian - First Floor

09:00 Welcome and Introductions

09:40 Session 1: Security and Ideas
  • Jill Cao: The Idea Garden: from a Qualitative Evaluation toward a Quantitative Evaluation and Generalization.

10.30 Coffee Break - Kristall Foyer - First Floor

11:30 Session 2: Models and Drawings
  • Iman Avazpour: Towards User-Centric Concrete Model Transformation.
  • Jorge Mendes: Model-Driven Spreadsheets in a Multi-User Environment.
  • Mattia De Rosa: On the Auto-Completion of Hand Drawn Symbols.

Short Panel discussion

12.30 Lunch - Kristall Foyer - First Floor

14:00 Session 3: Programming
  • Tom Lieber: Really Programming in Public.
  • Jennifer L. Davidson: Involving Older Adults in the Design and Development of Free/Open Source Software.

Short Panel discussion

15.30 Coffee Break - Kristall Foyer - First Floor
16:00 Session 4: Software Engineering
• Dustin Heaton: *What Software Engineering Can Do for Computational Science and Engineering.*
• Michael J. Lee: *Social Debugging Game for Learning & Engagement.*

Panel discussion and Round-up.

17:30 Close

19.00 Welcome reception
Hotel Grauer Bär - Universitätsstrasse 5-7
Monday, October 1

09.00 Welcome
Room: Hall Brüssel - Ground Floor
Chair: Gennaro Costagliola

09.15 Keynote: Prof. Alan Blackwell
Computational Thinking and Creative Practice
Room: Hall Brüssel - Ground Floor
Chair: Gem Stapleton

10.30 Coffee Break - Kristall Foyer - First Floor

11.00 Session 1. Spreadsheets and Tables
Room: Hall Brüssel - Ground Floor
Chair: Margaret Burnett

- Planted-model evaluation of algorithms for identifying differences between spreadsheets (full paper)
  Anna Harutyunyan, Glencora Borradaile, Christopher Chambers and Christopher Scaffi

- Design and Evaluation of a Literate Spreadsheet (short paper)
  Matthew Dinmore

- Extension and Implementation of ClassSheet Models (short paper)
  Jácome Cunha, João Paulo Fernandes, Jorge Mendes and João Saraiva

- Automating Data Entry for End Users (full paper)
  Allen Cypher

12.30 Lunch - Kristall Foyer - First Floor
14.00 Session 2. Design and Notation
Room: Hall Brüssel - Ground Floor
Chair: John Howse

- The Shape of Empty Space: Human-Centred Cognitive Foundations in Computing for Spatial Design (full paper)
  Mehul Bhatt, Carl Schultz and Minqian Huang

- Using the “Physics” of Notations to Analyze a Visual Representation of Business Decision Modeling (short paper)
  John C. Thomas, Judah Diament, Jacquelyn Martino and Rachel K. E. Bellamy

- A Combination of Stroke Manipulation and Recognition Strategies to Support User Interface Construction and Interactive Behavior Definition through Sketching (short paper)
  Vinícius C. V. B. Segura and Simone D. J. Barbosa

- On the Impact of Layout Quality to Understanding UML Diagrams: Diagram Type and Expertise (full paper)
  Harald Störrle

15.30 Coffee Break - Kristall Foyer - First Floor

16.00 Session 3. End Users: Mobile Devices and Programming
Room: Hall Brüssel - Ground Floor
Chair: Allen Cypher

- From Barriers to Learning in the Idea Garden: An Empirical Study (full paper)
  Jill Cao, Irwin Kwan, Rachel White, Scott D. Fleming, Margaret Burnett and Christopher Scaffidi

- wProjects: Data-centric Web Development for Female Nonprogrammers (short paper)
  Nicole L. Harshbarger and Mary Beth Rosson

- An Exploratory Study of Blind Software Developers (short paper)
  Sean Mealin and Emerson Murphy-Hill

- End-user programmers on the loose: A study of programming on the phone for the phone (full paper)
  Balaji Athreya, Faezeh Bahmani, Alex Diede and Christopher Scaffidi

- A Prototype for EUD in Touch-based Mobile Devices (short paper)
  José Danado and Fabio Paternò
Tuesday, October 2

09.15 Session 4. Symbols and Notation
Room: Hall Brüssel - Ground Floor
Chair: Brad Myers

- *Informing the Design of Situated Glyphs for a Care Facility (full paper)*
  Jo Vermeulen, Fahim Kawsar, Adalberto L. Simeone, Gerd Kortuem, Kris Luyten and Karin Coninx

- *Symbol Choice and Memory of Visual Models (short paper)*
  Kathrin Figl

- *Combining cognitive, semiotic and discourse analysis to explore the power of notations in visual programming (full paper)*
  Juliana J. Ferreira, Clarisse S. de Souza, Luciana C. de Castro Salgado, Cleiton Slaviero, Carla F. Leitão and Fábio de F. Moreira

10.30 Coffee Break

11.00 Poster session *(see page 14)*
Room: Hall Brüssel and Brüssel Foyer - Ground Floor
Chair: Chris Scaffidi

12.30 Lunch

14.00 Session 5. Code Understanding
Room: Hall Brüssel - Ground Floor
Chair: John Hosking

- *GUI-Driven Code Tracing (full paper)*
  André L. Santos

- *Visualizing Traceability Links between Source Code and Documentation (full paper)*
  Xiaofan Chen, John Hosking and John Grundy

- *Automatically locating relevant programming help online (full paper)*
  Oleksii Kononenko, David Dietrich, Rahul Sharma and Reid Holmes

15.30 Coffee Break
16.00 Session 6. Domain-Specific Languages
Room: Hall Brüssel - Ground Floor
Chair: Mark Minas

- Blocks Languages for Creating Tangible Artifacts (full paper)
  Franklyn Turbak, Smaranda Sandu, Olivia Kotsopoulos, Emily Erdman, Erin Davis and Karishma Chadha

- Simplifying Filter/Flow Graphs by Subgraph Substitution (short paper)
  Florian Haag, Steffen Lohmann and Thomas Ertl

- Development of platform-independent and multi-user choreographies based on ontology combination and mapping (short paper)
  Emanuel Silva, Nuno Silva, Hugo Paredes, Paulo Martins, Benjamim Fonseca and Leonel Morgado

- Supporting Requirements Modelling in the Malay language using Essential Use Cases (short paper)
  Massila Kamalrudin, John Grundy and John Hosking

17.30 Innsbruck’s old town guided tour

19.00 Conference Dinner
Stiftskeller Restaurant - Stiftgasse 1
Wednesday, October 3

09.15   Keynote: Prof. David Harel
Some Thoughts on Executable Visual Languages and their Interfaces
Room: Hall Brüssel - Ground Floor
Chair: Martin Erwig

10.30 Coffee Break

11.00   Session 7. New Approaches to Program Specification
Room: Hall Brüssel - Ground Floor
Chair: Mary Beth Rosson

- Providing End-Users with a Visual Editor to Make their Electronic Documents Active (short paper)
  Federico Cabitza, Iade Gesso and Carla Simone

- Runtime Semantics of Use Case Stories (short paper)
  Michał Smiałek, Norbert Jarzębowski and Wiktor Nowakowski

- Investigating the Role of Purposeful Goals on Novices’ Engagement in a Programming Game (short paper)
  Michael J. Lee and Andrew J. Ko

- Evaluating a Natural Language Interface for Behavioral Programming (short paper)
  Michal Gordon and David Harel

- Augmenting Flow Diagrams Created by End-user Programs (short paper)
  Jonathan Lung and Steve Easterbrook

- Usable Results from the Field of API Usability: A Systematic Mapping and Further Analysis (short paper)
  Chris Burns, Jennifer Ferreira, Theodore D. Hellmann and Frank Maurer

12.30 Lunch
14.00  Session 8. Social Computing
Room: Hall Brüssel - Ground Floor
Chair: Steve Tanimoto

- Rapid Serial Visual Presentation in Dynamic Graph Visualization (full paper)
  Fabian Beck, Michael Burch, Corinna Vehlow, Stephan Diehl and Daniel Weiskopf

- KikuNavi: Real-time Pedestrian Navigation based on Social Networking Service and Collective Intelligence (short paper)
  Hikaru Nagasaka, Makoto Okabe and Rikio Onai

- Visualizing Dynamic Trajectories in Social Networks (full paper)
  Hui Liu, Peter Eades and Seok-Hee Hong

- CoSolve: A System for Engaging Users in Computer-Supported Collaborative Problem Solving (full paper)
  Sandra B. Fan, Tyler Robison and Steven L. Tanimoto

15.45  Closing remarks and VLHCC 2013 presentation
Room: Hall Brüssel - Ground Floor

16.00 Refreshments - Kristall Foyer - First Floor
Thursday, October 4

Tutorial - TutASD
The Art and Science of Diagramming: Communicating Effectively Using Diagrams
Room: Hall Lugger - First Floor

09:00
- The importance of diagrams in IT practice
- What is a diagram?
- What is a “good” diagram?
- The current state of diagramming practice
- Best practices and urban myths
- CASE tools and drawing tools

11:00
- How diagrams communicate
- Theories of graphic design
- Theories of visual perception and cognition
- Evidence-based diagramming: principles for producing effective diagrams
- Principle of discriminability: diagrams should be easy to read

14:00
- Principle of modularity: diagrams should not overload the circuitry of the human mind
- Principle of cognitive integration: include mechanisms to support navigation between diagrams and holistic understanding
- Principle of emphasis: draw attention to the most important information
- Principle of structure: group related information together

16:00
- Principle of identification: diagrams should be clearly labelled
- Principle of visual expressiveness: use the full range of visual variables and minimise visual variation (noise)
- Conclusion: a manifesto for effective diagramming

18:15 Closing
Thursday, October 4

Workshop - CDCH’12
Creative Design for Interdisciplinary Projects in Cultural Heritage
Room: Hall Maximilian - First Floor

09:00 Welcome speech, workshop introduction and self-introduction of participants
09:30 Invited talk: Standards, Prototypes, and Pilot Projects — Technology and Flexibility in Designing Cultural Heritage Projects in Challenging Contexts (Alessandro Califano, ICOM-AVICOM and Cultural Consultant for UNESCO)
10:00 Invited talk: Wiki Loves Monuments - Creativity, Cultural Heritage and Social Media (Wiki Loves Monuments Representative)

Kristall Foyer - First Floor

11:00 Session 1 (Chair: Stefano Valtolina)
11:00 Mediating Creative Design in Cultural Heritage Projects with a Design Actions Structure
11:20 Semantic Map-based Exploration Supporting Interdisciplinary Collaboration
12:00 Design for Living Cultural Heritage
12:20 Short presentations of posters, demos and exhibitions

Kristall Foyer - First Floor

14:00 Posters, demos and exhibitions
14:30 Session 2 (Chair: Antonella De Angeli)
14:30 Material Culture in Heritage Narratives. Museum Studies, Case III: MT-CIPE
14:50 Objects of Wonder - Designing a Digitally Enhanced Space for Children’s Engagement with Museum Objects
15:10 New Channels, Creativity, EUD for Creating Engaging Experiences of Cultural Heritage

Kristall Foyer - First Floor

16:00 Session 3 (Chair: Cristina Vannini)
16:00 Communication Issues in Cultural Heritage Projects
16:20 Combined presentation of:
• A Multi-perspective Approach for Designing Interactive Experiences to Reveal Cultural Heritage
• Light through Culture
• Experience Design in a Multicultural and Disciplinary Team
17:10 Group activity, plenary discussion and proposals for future developments
18:15 Closing session

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Poster and Demos (in alphabetical order by first author’s surname)
Room: Hall Brüssel and Brüssel Foyer - Ground Floor

- *The Visual Contract Builder Tool*
  Nuno Amálio and Christian Glodt

- *CONVERt: A Framework for Complex Model Visualisation and Transformation*
  Iman Avazpour and John Grundy

- *Visual languages conversion from Saber models to Modelica multi-system simulation environments*
  Felice Colarusso, Gennaro Costagliola, Fiorenzo D'Errico, Nicola Perillo and Fabrizio Torre

- *TypeJump: A Typing Game for KeyScratch*
  Gennaro Costagliola, Mattia De Rosa, Vittorio Fuccella and Fabrizio Torre

- *SmellSheet Detective: A Tool for Detecting Bad Smells in Spreadsheets*
  Jácome Cunha, João Paulo Fernandes, Pedro Martins, Jorge Mendes and João Saraiva

- *Comparison of Visual Languages in Geographic Information Systems*
  Zdena Dobesova and Petr Dobes

- *Skeletons from Sketches of Dancing Poses*
  Manuel J. Fonseca, Stuart James and John Collomosse

- *Handling of Layout-Sensitive Semantics in a Visual Control Language*
  Niklas Fors and Görel Hedin

- *Combining Multitouch Gestures and Sketches to Explore Photo Collections*
  Paulo Gonçalves and Manuel J. Fonseca

- *Visual clutter reduction for UML component diagrams: A tool presentation*
  Lukas Holy, Jaroslav Snajberk and Premek Brada

- *Dependency Injection Refined by Extra-functional Properties*
  Kamil Ježek, Lukáš Holý and Premek Brada

- *Modelling a Cardiac Pacemaker Visually and Formally*
  Jérôme Leemans and Nuno Amálio
- Linking Codecharts with Programs
  Jon Nicholson, Aidan Delaney and Gem Stapleton

- CodeSmellExplorer: Tangible Exploration of Code Smells and Refactorings
  Felix Raab

- GUITA Toolkit: Interaction-Driven Code Tracing
  André L. Santos

- A Mobile Visual Programming System for Android Smartphones and Tablets
  Wolfgang Slany

- An Advanced Interactive Visualization Approach with Extra Functional Properties
  Jaroslav Šnajberk, Kamil Jezek and Premek Brada

- Suitability of Visual Modelling Languages for Modelling Tangible User Interface Applications
  Eric Tobias, Eric Ras and Nuno Amálio
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