

# VL/HCC 2010

2010 IEEE Symposium on Visual Languages and Human-Centric Computing  
September 21–25, 2010  
Universidad Carlos III de Madrid  
Leganés (Madrid), Spain

Preliminary Program (September 6<sup>th</sup>, 2010)

## Symposium at a Glance

	Tuesday		Wednesday	Thursday	Friday	Saturday	
Rooms	Room UC3M-1.1.J12 Agustin de Betancourt Building	Room UC3M-4.1.D03 Torres Quevedo Building	Room “Salón de Grados” Auditorio Padre Soler Building			Tryp Hotel	
Early Morning	Graduate Student Consortium	Workshop on Visual Formalisms for Patterns	Opening Keynote: Ed Chi	Spreadsheets & Neurons	Closing Keynote: Jan Jürjens	EUSES Consortium Annual Meeting	Tutorial: Model-Driven Engineering
Late Morning			Assisting Programmers	Graph & Model Transforms	Understanding Designers & Programmers		
Early Afternoon			Games & Learning	Web Programming	Visual Languages & Formalisms		
Late Afternoon			Debugging	Spiders & Graphs	Symposium Close		
Evening	Welcome Reception			Madrid Walking Tour and Banquet	Excursion to Toledo		

**And 2 posters sessions during the coffee breaks of Wednesday and Thursday!**

**2010 Psychology of Programming Workshop (PPIG) starts on September 19<sup>th</sup>, register is also open!**

## Addresses and Places

**From Monday to Friday**, all rooms are in Universidad Carlos III de Madrid. University address is Avenida de la Universidad 30 in Leganés (Madrid).

**Saturday**, rooms are in Hotel Tryp. The address is Avenida de la Universidad 7 in Leganés (Madrid). This hotel is 5 minutes far from University and it is on the same street.

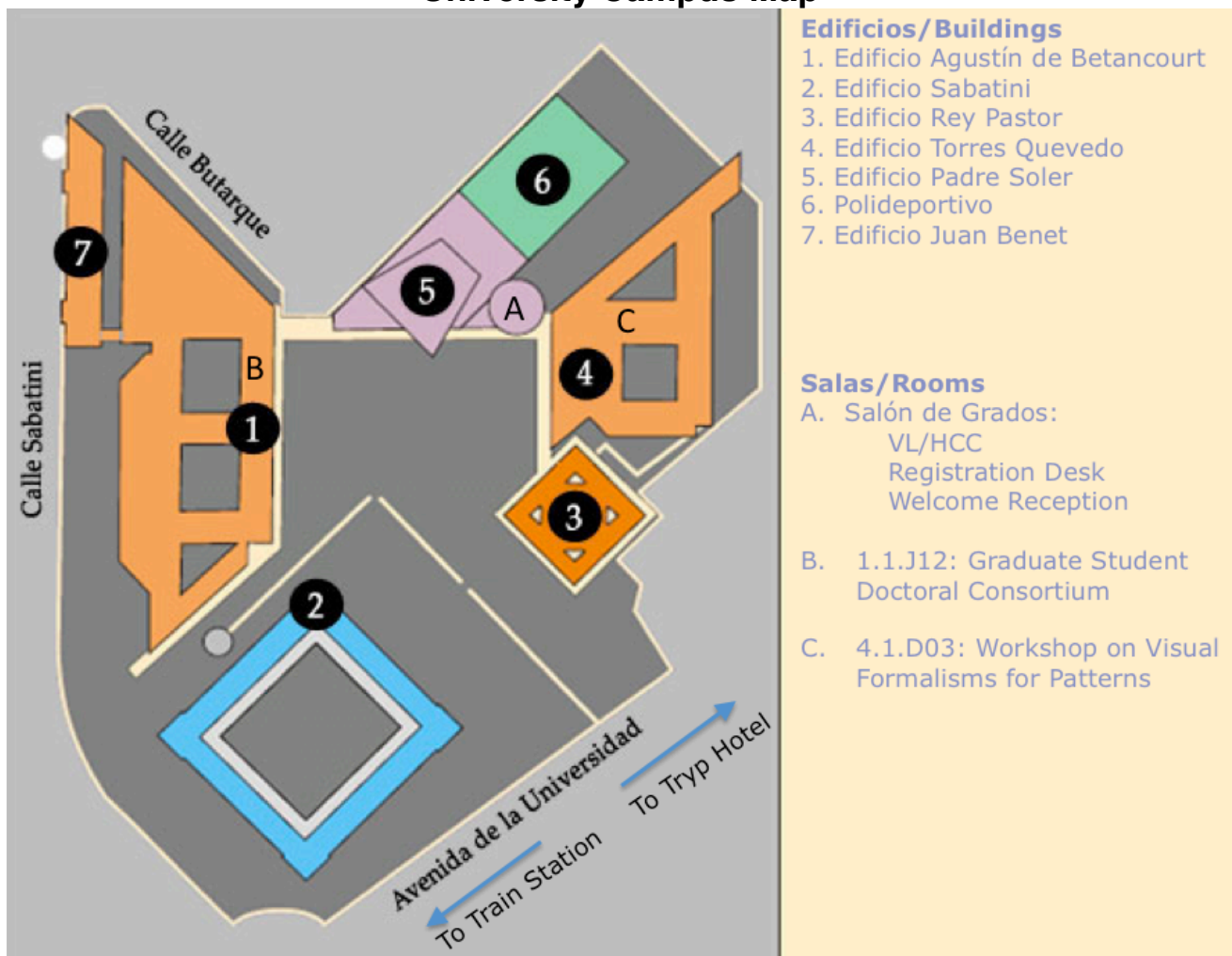
**Registration desk** will be in front of "Salón de Grados", Universidad Carlos III de Madrid.

**Welcome Reception** will be in front of "Salón de Grados", Universidad Carlos III de Madrid.

**Madrid Walking Tour** will start from "Paseo del Arte" Hotel. The Hotel address is Calle de Atocha 123 in Madrid.

**The banquet** will be in "La Ancha". Its address is Calle Zorrilla 7 in Madrid.

### University Campus Map



## VL/HCC Most Influential Papers

Also this year, the VL/HCC community is continuing the tradition of honoring research papers whose appearance in this conference had important influences on VL/HCC research or commerce. A voting group consisting of all members of the current steering committee, current program committee, and program chairs of the VL/HCC conferences of the years being considered, review the papers from the VL/HCCs held one decade ago and two decades ago, to select the papers from these decades that have had the most influence on VL/HCC research or commerce.

The voting group considered technical papers presented at VL/HCC approximately one decade ago (in 1999, 2000, and 2001) and approximately two decades ago (in 1989, 1990, and 1991). All members were invited to nominate papers from these years and, once a shortlist of nominated papers was produced, the members who did not have conflicts with the nominees reviewed and voted for the most influential paper from each decade.

The process was organized and facilitated by Gennaro Costagliola, Maria Francesca Costabile and John Grundy.

Following this process, the group voted to award the Most Influential Paper Awards to the following papers. These awards will be officially presented at VL/HCC 2010 in Madrid, Spain.

- **Most Influential Paper from approximately two decades ago**

- ***The specification of visual language syntax***

- *EJ Golin, SP Reiss*

- 1989 IEEE Symposium on Visual Languages

- Available from IEEE Explore: <http://dx.doi.org/10.1109/WVL.1989.77050>

- **Most Influential Paper from approximately one decade ago**

- ***Extending UML for Modeling of Multimedia Applications***

- *Stefan Sauer, Gregor Engels*

- 1999 IEEE Symposium on Visual Languages

- Available from IEEE Explore: <http://dx.doi.org/10.1109/VL.1999.795878>

## Wednesday, September 22

- 09:15 – 09:30 **Welcome and Opening Words**  
*Paloma Díaz & Mary Beth Rosson, General Chairs, VL/HCC 2010*  
*Christopher Hundhausen & Emmanuel Pietriga, Program Chairs, VLHCC 2010*  
*Carlos Balaguer, Vice-President of Research. Universidad Carlos III de Madrid*
- 09:30 – 09:45 **VL/HCC Most Influential Papers Award**  
*Gennaro Costagliola, Maria Francesca Costabile and John Grundy. MIP Coordinators*
- 09:50 – 10:50 **Opening Keynote** (Session Chair: Mary Beth Rosson)  
Model-Driven Research in Human-Centric Computing  
*Ed Chi, Palo Alto Research Center, USA*
- 10:50 – 11:00 **30 seconds Posters Presentations** (Session Chair: Alessio Malizia)
- 11:00 – 11:30 **Break**
- 11:30 – 13:00 **Assisting Programmers** (Session Chair: Martin Erwig)
- 11:30 Cleanroom: Edit-Time Error Detection with the Uniqueness Heuristic  
*Andrew Ko and Jacob Wobbrock, University of Washington, USA*
- 12:00 Calcite: Completing Code Completion for Constructors using Crowds  
*Mathew Mooty, Andrew Faulring, Jeffrey Stylos and Brad Myers, Carnegie Mellon University, USA*
- 12:30 Using Association Metrics to Help Users Navigate API Documentation  
*Daniel Eisenberg, Jeffrey Stylos, Andrew Faulring and Brad Myers, Carnegie Mellon University, USA*
- 13:00 – 14:30 **Lunch**
- 14:30 – 16:00 **Debugging** (Session Chair: Andrew Ko)
- 14:30 Debugging Concurrent Software: The Importance of External Representations  
*Scott Fleming, Oregon State University, Eileen Kraemer, University of Georgia, R. E. K. Stirewalt, LogicBlox and Laura Dillon, Michigan State University, USA*
- 15:00 Conversational Debugging: Supporting End-User Debugging of Machine-Learned Programs  
*Todd Kulesza, Oregon State University, Simone Stumpf City University London (UK), Margaret Burnett, Oregon State University, Weng-Keen Wong, Oregon State University, Yann Riche, Riche Design, Travis Moore, Oregon State University, Ian Oberst, Oregon State University, Amber Shinsel, Oregon State University and Kevin McIntosh, Oregon State University, USA*
- 15:30 Does my model work? Evaluation abstractions of cognitive modelers  
*Christopher Bogart, Margaret Burnett, Oregon State University, Scott Douglass, Air Force Research Laboratories, David Piorkowski and Amber Shinsel, Oregon State University, USA*

## Wednesday, September 22 (cont.)

16:00 – 16:30 **Break**

16:30 – 18:00 **Games & Learning** *(Session Chair: Maria Francesca Costabile)*

- 16:30 Towards the Automatic Recognition of Computational Thinking  
*Kyu Han Koh, Ashok Basawapatna, Vicki Bennett and Alexander Repenning, University of Colorado at Boulder, USA*
- 17:00 Young People's Descriptions of Computational Rules in Role-Playing Games: An Empirical Study  
*Judith Good, Katherine Howland and Keiron Nicholson, School of Informatics, University of Sussex, UK*
- 17:30 Analyzing a Process of Collaborative Game Design (Short Paper)  
*Sandra Fan , Brian Johnson, Yun-en Liu, Tyler Robison , Rolfe Schmidt and Steven Tanimoto, University of Washington, USA*
- 17:45 First Steps in Coding by Informal Web Developers (Short Paper)  
*Thomas Park and Susan Wiedenbeck, Drexel University, USA*

## Thursday, September 23

- 09:50 – 11:20 **Spreadsheets & Neurons** (Session Chair: Margaret Burnett)
- 09:50 SheetDiff: A Tool for Identifying Changes in Spreadsheets  
*Chris Chambers, Martin Erwig, Oregon State University, USA and Markus Luckey, Universität Paderborn, Germany*
- 10:20 Automatically Inferring ClassSheet Models from Spreadsheets  
*Jácome Cunha, Universidade do Minho, Portugal, Martin Erwig, Oregon State University, USA and João Saraiva, Universidade do Minho, Portugal*
- 10:50 Causal Reasoning with Neuron Diagrams  
*Martin Erwig and Eric Walkingshaw, Oregon State University, USA*
- 11:20 – 11:30 **30 seconds Posters Presentations** (Session Chair: Alessio Malizia)
- 11:30 – 12:00 **Break**
- 12:00 – 13:15 **Graph & Model Transforms** (Session Chair: Paolo Bottoni)
- 12:00 Euler Graph Transformations for Euler Diagram Layout  
*Peter Rodgers, University of Kent, Gem Stapleton, University of Brighton, John Howse, University of Brighton, and Leishi Zhang, University of Kent, UK*
- 12:30 A Visual Specification Language for Model-to-Model Transformations  
*Esther Guerra, Juan de Lara, Universidad Carlos III de Madrid, Spain, Dimitrios Kolovos and Richard Paige, University of York, UK*
- 13:00 Lightweight Executability Analysis of Graph Transformation Rules (Short Paper)  
*Elena Planas, Universitat Oberta de Catalunya, Spain, Jordi Cabot, INRIA - École des Mines de Nantes, France, Cristina Gómez, Universitat Politècnica de Catalunya, Spain, Esther Guerra, Universidad Carlos III de Madrid, Spain and Juan de Lara, Universidad Autónoma de Madrid, Spain*
- 13:15 – 14:45 **Lunch**
- 14:45 – 16:15 **Web Programming** (Session Chair: Emmanuel Pietriga)
- 14:45 Programming-by-Example Meets the Semantic Web: Using Ontologies and Web Services to Close the Semantic Gap  
*Paul Gordon, Ken Barker and Christoph Sensen, University of Calgary, Canada*
- 15:15 Design Planning in End-User Web Development: Gender, Feature Exploration and Feelings of Success  
*Mary Beth Rosson, Hansa Sinha and Tisha Edor, Pennsylvania State University, USA*
- 15:45 A Debugging Perspective on End-User Mashup Programming  
*Jill Cao, Kyle Rector, Oregon State University, Thomas Park, Drexel University, Scott Fleming, Oregon State University, Margaret Burnett, Oregon State University and Susan Wiedenbeck, Drexel University, USA*
- 16:15 – 16:45 **Break**
- 16:45 – 18:15 **Spiders & Graphs** (Session Chair: John Howse)
- 16:45 Introducing Second-Order Spider Diagrams for Defining Regular Languages  
*Peter Chapman and Gem Stapleton, University of Brighton, UK*
- 17:15 TimeSpiderTrees: A Novel Visual Metaphor for Dynamic Compound Graphs  
*Michael Burch, University of Stuttgart, Michael Fritz, Fabian Beck and Stephan Diehl, University Trier, Germany*
- 17:45 Improving Effectiveness of Graph Drawing Algorithms by Making Compromises between Aesthetics  
*Weidong Huang, CSIRO ICT Centre, Australia, Peter Eades, Seokhee Hong, University of Sydney, Australia and Chun-Cheng Lin, Taipei Municipal University of Education, Taiwan*
- 19:30 – 00:30 **Madrid Walking Tour and Symposium Banquet**

## Friday, September 24

- 10:00 – 11:00 **Closing Keynote** (Session Chair: Paloma Díaz)  
Model-based Security Engineering with UML: The Last Decade and Towards the Future  
*Jan Jürjens, Technical University of Dortmund, Germany*
- 11:00 – 11:30 **Break**
- 11:30 – 13:15 **Understanding Designers and Programmers** (Session Chair: Brad Myers)
- 11:30 Struggling to Excel: A Field Study of Challenges Faced by Spreadsheet Users  
*Chris Chambers and Christopher Scaffidi, Oregon State University, USA*
- 12:00 Drawing and Sketching in Open Source design  
*Eunyoung Chung, Carlos Jensen, Oregon State University, USA, Koji Yatani, University of Toronto, Canada, Victor Kuechler, Oregon State University, USA and Khai N. Truong, University of Toronto, Canada*
- 12:30 Understanding Expressions of Unwanted Behaviors in Open Bug Reporting (Short Paper)  
*Parmit K. Chilana, Andrew J. Ko and Jacob O. Wobbrock, University of Washington, USA*
- 12:45 How is User Interface Prototyping Really Done in Practice? A Survey of User Interface Designers (Short Paper)  
*Adam S. Carter and Christopher D. Hundhausen, Washington State University, USA*
- 13:00 Information Remix Patterns and Motivations of Everyday End-Users (Short Paper)  
*Nan Zang, Pennsylvania State University, USA*
- 13:15 – 14:45 **Lunch**
- 14:45–16:15 **Visual Languages & Formalisms** (Session Chair: Mark Minas)
- 14:45 Semantic Navigation Strategies for Scenario-Based Programming  
*Michal Gordon and David Harel, Weizmann Institute of Science, Israel*
- 15:15 Modular Design by Contract Visually and Formally using VCL  
*Nuno Amalio and Pierre Kelsen, University of Luxembourg, Luxembourg*
- 15:45 Towards a Formal Notion of Interaction Pattern (Short Paper)  
*Paolo Bottoni, University of Rome, Italy, Esther Guerra, Universidad Carlos III de Madrid, Spain and Juan de Lara, Universidad Autonoma de Madrid, Spain*
- 16:00 A Suite of Visual Languages for Supply Chain Specification and Management (Short Paper)  
*Rick Zhang, John Hosking, University of Auckland, New Zealand, John Grundy, Swinburne University of Technology, Australia, Nikolay Mehandjiev and Martin Carpenter, University of Manchester, UK*

## Friday, September 24 (cont.)

- 16:15-16:30 **Coffee break**
- 16:30-17:25 **Panel: Support for the Uptake of User-Developed Services - business versus community models** (Session Chair: Alessio Malizia)  
Nikolay Mehandjiev, Univ Manchester  
Antonella de Angeli, Univ Trento
- 17:25-17:50 **Symposium Close**  
*Paloma Díaz & Mary Beth Rosson, General Chairs, VL/HCC 2010*  
*Christopher Hundhausen & Emmanuel Pietriga, Program Chairs, VLHCC 2010*  
*Brad Myers, General Chair, VLHCC 2011*
- 18:00-00:00 **Excursion to Toledo**

# Democratizing Computational Tools

## Graduate Student Doctoral Consortium

**Tuesday, September 21 (Room UC3M-1.1.J12)**

### Panel

Andrew Ko, University of Washington  
Judith Good, University of Sussex  
Andrew Begel, Microsoft Research  
Emmanuel Pietriga, INRIA, France

9:00 – 9:30      **Introductions**

9:30 – 10:30    **Pawan Agarwal**, Washington State University  
**Sandra B. Fan**, University of Washington

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**Collaboration** 20 minute talks, 5 for questions  
A Socio-Psychological Approach to Improve Student Participation and Review Quality in Peer Code Reviews  
Roles in Online Collaborative Problem Solving  
Panel discussion 10 minutes

10:30 – 11:00   **Break**

11:00 – 12:30   **John Daughtry**, Pennsylvania State University  
**Rebecca Yates**, University of Limerick  
**Eric Walkingshaw**, Oregon State University

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**Program Understanding** 20 minute talks, 5 for questions  
The Style and Substance of API Names  
Studying onboarding to improve program comprehension tool support  
Managing Variation in Explanation-Oriented Languages  
Panel discussion 15 minutes

12:30 – 14:30   **Lunch** Piel de Toro, Calle del Charco, 1, 28911 Leganes, España

14:30 – 15:30   **Stephen Oney**, Carnegie Mellon University  
**Thomas Park**, Drexel University

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**Interaction Design** 20 minute talks, 5 for questions Democratizing Computational Tools for Interaction Designers Supporting Novice Development of Webpage Layouts for Multiple Display Devices  
Panel discussion 10 minutes

15:30 – 16:00   **Break**

16:00 – 17:30   **Chris Bogart**, Oregon State University  
**Adam Carter**, Washington State University  
**Todd Kulesza**, Oregon State University

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**Debugging** 20 minute talks, 5 for questions  
Debugging with Evaluation Abstractions  
Making Memory Transparent: Design of a Novice Programming Environment for C  
Toward End User Debugging of Machine-Learned Classifiers  
Panel discussion 15 minutes

17:30 –          **Dinner**

# Workshop on Visual Formalisms for Patterns

**Tuesday, September 21 (UC3M-4.1.D03 Room)**

<b>9:30</b>	<b>Opening</b>
<b>9:30-10:30</b>	<b>Invited Talk</b> Yngve Lamo (Bergen University College) <i>A Formal Approach to Patterns in MDE</i>
<b>10:30-11:00</b>	<b>Coffee Break</b>
<b>11:00-12:50</b>	<b>Session 1: Architectural Patterns and Refactorings.</b> Hyder Ali Nizamani, Emilio Tuosto (University of Leicester, UK) <i>Federated Identity Management System Patterns as Architectural Reconfigurations</i> Vincent Feru, Jacques Simonin and Gaël Fromentoux (Orange Labs and TELECOM Bretagne, France) <i>Context Adaptation for Content Delivery Based on Architectural Patterns in Telecommunication Networks</i> Karen Li, John Hosking and John Grundy (University of Auckland, New Zealand and Swinburne University of Technology, Australia) <i>A Generic Visual Language Technique for DSVL Model Refactoring to Patterns</i>
<b>13:00-14:30</b>	<b>Lunch</b>
<b>14:30-16:00</b>	<b>Session 2: Patterns for User Interfaces and Interaction Design.</b> Sonja Maier and Mark Minas (Universität der Bundeswehr München, Germany) <i>Combination of Different Layout Approaches</i> Kai Breiner, Marc Seissler, Gerrit Meixner, Malte Brunnlieb, Thilo Rauch, Peter Reuter, Philipp Diebold, Markus Kleine and Lars Scherer (University of Kaiserslautern and German Research Center for Artificial Intelligence, Germany) <i>SmartMote: Increasing the Flexibility of Run-Time Generated User Interfaces by Using UIML</i> Claudia Iacob, Piero Mussio, Li Zhu and Barbara Rita Barricelli (University of Milan, Italy) <i>Towards a Pattern Language for Collaborative Interaction Design</i>
<b>16:00-16:30</b>	<b>Coffee Break</b>
<b>16:30-17:30</b>	<b>Session 3: Specification Patterns.</b> Ali Hamie, John Howse and Andrew Fish (University of Brighton, UK) <i>Visual Specification Patterns</i> Karen Li, John Hosking, John Grundy, Tony Ly and Brian Webb (University of Auckland, New Zealand and Swinburne University of Technology, Australia) <i>Augmenting DSVL Meta-Tools with Pattern Specification, Instantiation and Reuse</i>
<b>17:30-18:30</b>	<b>Group Discussion.</b>
<b>18:30-18:45</b>	<b>Wrap up and Closing</b>

## Thanks to our Sponsors

