Visual Week 2008
Program

VL/HCC 2008

Visual Week
Herrsching am Ammersee
Germany
15-21 September 2008

SoftVis 2008

Diagrams 2008

sponsored by
## Visual Week 2008
### Herrsching am Ammersee, Germany
### September 15-21, 2008
### Program at a Glance

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 - 09:00</td>
<td>Registration</td>
<td>Lobby</td>
</tr>
<tr>
<td>09:00 - 09:15</td>
<td>Opening</td>
<td>Seminarraum 1</td>
</tr>
<tr>
<td>09:15 - 10:30</td>
<td>Invited talk: Eileen Kraemer</td>
<td>Seminarraum 1</td>
</tr>
<tr>
<td>10:30 - 11:00</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>11:00 - 11:45</td>
<td>Layout Extension and Interaction</td>
<td>Seminarraum 1</td>
</tr>
<tr>
<td>11:45 - 12:30</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>12:30 - 13:30</td>
<td>Layout Specification and Communication</td>
<td>Seminarraum 1</td>
</tr>
<tr>
<td>13:30 - 14:15</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>14:15 - 15:00</td>
<td>Group Exercise</td>
<td>Seminarraum 1</td>
</tr>
<tr>
<td>15:00 - 15:30</td>
<td>Roundup</td>
<td>Seminarraum 1</td>
</tr>
<tr>
<td>15:30 - 16:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:15 - 17:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:00 - 17:15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Tuesday, Sept. 16

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 - 08:45</td>
<td>Registration</td>
<td>Lobby</td>
</tr>
<tr>
<td>08:45 - 09:00</td>
<td>Session A</td>
<td>Konferenzraum</td>
</tr>
<tr>
<td>09:00 - 10:30</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>10:30 - 11:00</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>11:00 - 12:30</td>
<td>Session B</td>
<td>Konferenzraum</td>
</tr>
<tr>
<td>12:30 - 14:00</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>14:00 - 15:30</td>
<td>Session C</td>
<td>Konferenzraum</td>
</tr>
<tr>
<td>15:30 - 16:00</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>16:00 - 17:30</td>
<td>Session D</td>
<td>Konferenzraum</td>
</tr>
<tr>
<td>18:30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**VL/HCC & SoftVis Opening Reception and SoftVis Poster Session**

### Wednesday, Sept. 17

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 - 09:00</td>
<td>Registration</td>
<td>Lobby</td>
</tr>
<tr>
<td>09:00 - 09:15</td>
<td>VL/HCC Opening</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>09:15 - 10:30</td>
<td>Joint VL/HCC &amp; SoftVis Keynote: John Stasko</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>10:30 - 11:00</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>11:00 - 13:00</td>
<td>Joint VL/HCC &amp; SoftVis Paper Session: Visualization and Animation</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>13:00 - 14:30</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>14:30 - 16:00</td>
<td>End User Programming I</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>16:00 - 16:30</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>16:30 - 17:45</td>
<td>Supporting Professional Programmers</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>17:45 - 18:30</td>
<td>SoftVis Banquet</td>
<td>Restaurant</td>
</tr>
<tr>
<td>19:30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>08:45</td>
<td>Domain-Specific Languages</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>11:00</td>
<td>Visual Programming Tools</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>14:00</td>
<td>End User Programming II</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>15:30</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>16:00</td>
<td>Understanding and Supporting Designers</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>18:00</td>
<td>Bus departs for VL/HCC Banquet</td>
<td></td>
</tr>
</tbody>
</table>

**Friday, Sept. 19**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Registration</td>
<td>Lobby</td>
</tr>
<tr>
<td>09:00</td>
<td>Diagrams Opening</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>09:15</td>
<td>Joint VL/HCC &amp; Diagrams Keynote: Wilhelm Schäfer</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>10:30</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>11:00</td>
<td>Joint VL/HCC &amp; Diagrams Paper Session: Diagram Aesthetics and Layout</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>12:45</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>14:15</td>
<td>Joint VL/HCC &amp; Diagrams Paper Session: Modeling and Graphs</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>15:30</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>16:00</td>
<td>Tools for Interaction Design</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>17:30</td>
<td>VL/HCC Closing</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>18:30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Tutorial: Cognitive Dimensions of Notations: Understanding the Ergonomics of</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>11:00</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>11:30</td>
<td>Tutorial: Getting Started With Sketch Tools: A Tutorial on Sketch Recognition Tools</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>14:30</td>
<td>Diagrams Keynote: John Etchemendy</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>15:45</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>16:15</td>
<td>Applications of Diagrams</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>18:30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00</td>
<td>Theoretical Aspects</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>11:00</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>11:30</td>
<td>Diagrams Keynote: W. Bradford Paley</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>12:45</td>
<td>Lunch</td>
<td>Restaurant</td>
</tr>
<tr>
<td>14:00</td>
<td>Diagrams in Education</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>15:30</td>
<td>Break</td>
<td>Lobby</td>
</tr>
<tr>
<td>15:50</td>
<td>Understanding and Comprehension</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>17:20</td>
<td>Diagrams Closing</td>
<td>Großer Saal</td>
</tr>
<tr>
<td>17:30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Welcome

Welcome to Visual Week 2008 at Herrsching am Ammersee, Germany. Visual Week 2008 consists of the three symposia

- 2008 ACM Symposium on Software Visualization (SoftVis 2008) on Tuesday and Wednesday
- 2008 IEEE Symposium on Visual Languages and Human Centric Computing (VL/HCC 2008) on Wednesday till Friday, and
- Fifth International Conference on the Theory and Application of Diagrams (Diagrams 2008) on Friday till Sunday

as well as a VL/HCC Graduate Consortium on Tuesday, the VL/HCC workshops on Monday

- Second International Workshop on Layout of (Software) Engineering Diagrams (LED 2008) and
- Workshop on Sketch Tools for Diagramming,

and two Diagrams tutorials on Saturday

- Cognitive Dimensions of Notations: Understanding the Ergonomics of Diagram Use and
- Getting Started With Sketch Tools: A Tutorial on Sketch Recognition Tools.

The tutorials are included in the Diagrams registration.

This rich technical program is complemented by a versatile social program consisting of two receptions

- VL/HCC & SoftVis Opening Reception on Tuesday evening and
- Diagrams Reception on Friday evening

and the three conference banquets

- SoftVis conference dinner on Wednesday evening at the Conference Centre restaurant,
- VL/HCC conference dinner with beer tasting at Andechs Monastery on Thursday evening, and
- Diagrams conference dinner with brewery tour and beer tasting at Mühlfelder Brauhaus on Saturday evening.

Receptions and dinners are included for delegates of the corresponding symposia.

Each symposium, the VL/HCC Graduate Consortium and the workshops include break food & beverages in the Conference Centre Lobby as well as lunch at the Conference Centre Restaurant on the corresponding days.

Access to the Internet is available by WLAN in the Conference Centre Lobby and in the main lecture hall “Großer Saal” where all technical VL/HCC sessions take place.

We hope you will find Visual Week 2008 intellectually stimulating, that you take pleasure in meeting up with old colleagues and forging links with new ones, and enjoy the many attractions of Herrsching and the south of Munich.

The Visual Week 2008 organizers

Mark Minas (VL/HCC General Chair & Visual Week Local Organizer), Paolo Bottoni & Mary Beth Rosson (VL/HCC PC Co-Chairs)
Gem Stapleton (Diagrams General Chair), John Howse & John Lee (Diagrams PC Co-Chairs)
Rainer Koschke (SoftVis General Chair), Christopher Hundhausen & Alexandru Telea (SoftVis PC Co-Chairs)
Susan Wiedenbeck (Chair), Martin Erwig, Judith Good, John Pane, Mary Beth Rosson & Steve Tanimoto (VL/HCC Graduate Consortium Organizers)
Beryl Plimmer & Tracy Hammond (Sketch Tools for Diagramming Workshop Organizers)
Andrew Fish & Harald Störrle (LED Workshop Organizers)
VL/HCC Workshop  
*Layout of (Software) Engineering Diagrams*  
(Seminarraum 1)

08:00 – 09:00  
Registration

09:00 – 09:15  
Welcome Note

09:15 – 10:30  
Invited Talk  
Eileen Kraemer, University of Georgia

**Designing, Conducting, and Analyzing Empirical Studies**

10:30 – 11:00  
Break

11:00 – 12:30  
Layout Extension and Interaction

*Exploiting the Layout Engine to Assess Diagram Completions*  
Steffen Mazanek, Sonja Maier, Mark Minas

*Generating Euler Diagrams from Existing Layouts*  
Gem Stapleton, John Howse, Peter Rodgers, Leishi Zhang

*Interactive, Constraint-based Layout of Engineering Diagrams*  
Tim Dwyer, Kim Marriott, Michael Wybrow

12:30 – 13:30  
Lunch

13:30 – 15:00  
Layout Specification and Communication

*Layout Specification on the Concrete and Abstract Syntax Level of a Diagram Language*  
Sonja Maier, Steffen Mazanek, Mark Minas

*Positioning Map: a Visual Technique to Improve the Layout of Diagram Contextual Information*  
Nicolas Genon, Raimundas Matulevičius, Vincent Englebert, Patrick Heymans

*MSCar: Enhancing Message Sequence Charts with Interactivity for Analysing (Automotive) Communication Sequences*  
Michael Sedlmair

15:00 – 15:30  
Break

15:30 – 17:00  
Group Exercise

*3D UML Heuristic Challenge*  
Paul McIntosh, Jens von Pilgrim

17:00 – 17:15  
Roundup
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 – 09:00</td>
<td>Registration</td>
</tr>
<tr>
<td>09:00 – 09:15</td>
<td>Welcome Note</td>
</tr>
<tr>
<td>09:15 – 10:30</td>
<td>Recognition Topics</td>
</tr>
<tr>
<td></td>
<td><strong>A Model-Based Recognition Engine for Sketched Diagrams</strong></td>
</tr>
<tr>
<td></td>
<td>Florian Brieler, Mark Minas: Universität der Bundeswehr München</td>
</tr>
<tr>
<td></td>
<td><strong>A Profile-driven Sketching Interface for Pen-and-Paper Sketches</strong></td>
</tr>
<tr>
<td></td>
<td>Alexandra Bartolo, Philip Farrugia, Kenneth Camilleri, Jonathan Borg</td>
</tr>
<tr>
<td></td>
<td><strong>Cross-Domain Diagram Sketch Recognition</strong></td>
</tr>
<tr>
<td></td>
<td>Paul Schmieder, Beryl Plimmer: University of Auckland, Jean Vanderdonckt: Université catholique de Louvain</td>
</tr>
<tr>
<td></td>
<td><strong>What!?! No Rubine Features?: Using Geometric-based Features to Produce Normalized Confidence Values for Sketch Recognition</strong></td>
</tr>
<tr>
<td></td>
<td>Brandon Paulson, Pankaj Rajan, Pedro Davalos, Ricardo Gutierrez-Osuna, Tracy Hammond: Texas A&amp;M University</td>
</tr>
<tr>
<td></td>
<td><strong>Chinese Characters as Sketch Diagrams Using a Geometric-Based Approach</strong></td>
</tr>
<tr>
<td></td>
<td>Paul Taele, Tracy Hammond: Texas A&amp;M University</td>
</tr>
<tr>
<td>10:30 – 11:00</td>
<td>Break</td>
</tr>
<tr>
<td>11:00 – 11:45</td>
<td>Discussion on Recognition Topics</td>
</tr>
<tr>
<td>11:45 – 12:30</td>
<td>Applications Topics</td>
</tr>
<tr>
<td></td>
<td><strong>EditION: A Collaborative Calligraphic Tool to Manage Virtual Environments</strong></td>
</tr>
<tr>
<td></td>
<td>Alfredo Ferreira, Marco Vala, Guilherme Raimundo, J.A. Madeiras Pereira, Joaquim A. Jorge, Ana Paiva: IST / Technical University of Lisbon</td>
</tr>
<tr>
<td></td>
<td><strong>Automated Sketching and Engineering Culture</strong></td>
</tr>
<tr>
<td></td>
<td>Peter Varley, Pedro Company: Universitat Jaume I</td>
</tr>
<tr>
<td></td>
<td><strong>Sketching for the Refinement Stage of Design</strong></td>
</tr>
<tr>
<td></td>
<td>Gabe Johnson, Carnegie Mellon University</td>
</tr>
<tr>
<td>12:30 – 13:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:30 – 14:15</td>
<td>Live Demonstration Period</td>
</tr>
<tr>
<td>14:15 – 15:00</td>
<td>Discussion on Applications Topics</td>
</tr>
<tr>
<td>15:00 – 15:30</td>
<td>Break</td>
</tr>
<tr>
<td>15:30 – 16:15</td>
<td>General Topics</td>
</tr>
<tr>
<td></td>
<td><strong>Formality in Sketches and Visual Representation: Some Informal Reflections</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Calico: A Tool for Early Software Design Sketching</strong></td>
</tr>
<tr>
<td></td>
<td>Nicolas Mangano, Alex Baker, Mitch Dempsey, Emily Oh Navarro, André van der Hoek: University of California, Irvine</td>
</tr>
<tr>
<td></td>
<td><strong>Towards Semantic Role Labeling of Hand-drawn Sketches</strong></td>
</tr>
<tr>
<td></td>
<td>Gennaro Costagliola: Università di Salerno, Alberto Greco: Università di Genova</td>
</tr>
<tr>
<td>16:15 – 17:00</td>
<td>Discussion on Sketch Repository</td>
</tr>
<tr>
<td>17:00 – 17:15</td>
<td>Roundup</td>
</tr>
</tbody>
</table>
VL/HCC Graduate Consortium:  
Expanding the Benefits of Computational Thinking to Diverse Populations

The VL/HCC Graduate Consortium is open to all conference attendees, however please sign up for lunch and break food & beverages at the registration desk.

8:00 – 8:45  Registration
8:45 – 10:30  Session A
  Steps To Foster Computational Thinking by More of the World’s Citizens  
  Steve Tanimoto, University of Washington
  Developing Drawing and Visual Thinking Strategies to Ease Computer Programming for Dyslexics  
  Peter Coppin, University of Toronto
  Designing Explanation-Oriented Languages  
  Eric Walkingshaw, Oregon State University
  Development of Techniques for Sketched Diagram Recognition  
  Rachel Blagojevic, University of Auckland

Panel and audience discussion

10:30 – 11:00  Break
11:00 – 12:30  Session B
  Developing a Mobile Intelligent Tutoring System to Bridge The Digital Divide  
  Quincy Brown, Drexel University
  End-User Programming to Support Classroom Activities on Small Devices  
  Craig Prince, University of Washington
  The Design of an Asynchronous Web-Based Project Review System to Support Studio-Based Learning in Computing Education  
  Anukrati Agrawal, Washington State University

Panel and audience discussion

12:30 – 14:00  Lunch
14:00 – 15:30  Session C
  Mashups for the web-active user  
  Nan Zang, Pennsylvania State University
  Improving Experiences of Computation  
  Luke Church, University of Cambridge
  Rhetorical End-User Programming  
  Christopher Bogart, Oregon State University

Panel and audience discussion

15:30 – 16:00  Break
16:00 – 17:30  Session D
  Diagrams and Intuitive Formal Specifications  
  James Burton, University of Brighton
  Connecting the Social and Technical Aspects of Computing with Visualization  
  Erik H. Trainer, University of California, Irvine
  Towards End-User Web Software Visualization  
  Craig Anslow, Victoria University of Wellington

Panel and audience discussion
08:00 – 08:45  Registration
08:45 – 09:00  Opening to SoftVis
09:00 – 10:30  SV for Understanding  
(Chair: C. Hundhausen)
Assessing the Benefits of Synchronization-Adorned Sequence Diagrams: Two Controlled Experiments
Shuaohua Xie, Eileen Kraemer, University of Georgia, Athens, Georgia, USA; R.E.K. Stirewalt, Laura Dillon, Scott Fleming, Michigan State University, East Lansing, Michigan, USA
Visualization of Exception Handling Constructs to Support Program Understanding
Hina Shah, Carsten Goerg, and Mary Jean Harrold, Georgia Institute of Technology, Atlanta, Georgia, USA
Visual Analysis of Importance and Grouping in Software Dependency Graphs
Christian Pich, University of Konstanz, Germany; Lev Nachmanson and George Robertson, Microsoft Research, Redmond, Washington, USA
Algorithm Visualization Using Concrete and Abstract Shape Graphs
Sascha Parduhn, Raimund Seidel, and Reinhard Wilhelm, Saarland University, Saarbrücken, Germany

10:30 – 11:00  Break
11:00 – 12:30  SV for Testing and Debugging  
(Chair: A. Telea)
Analyzing the Reliability of Communication between Software Entities Using a 3D Visualization of Clustered Graphs
Dirk Zeckzer, Fraunhofer IESE, Kaiserslautern, Germany; Leon Schröder, University of Kaiserslautern, Germany; Robert Kalcklōsch, TU Kaiserslautern, Germany; Hans Hagen, University of Kaiserslautern, Germany; and Timo Klein, Fraunhofer IESE, Kaiserslautern, Germany
HDPV: interactive, faithful, in-vivo runtime state visualization for C/C++ and Java
Jaishankar Sundararaman, Godmar Back, Virginia Tech, Blacksburg, Virginia, USA
Representing Unit Test Data for Large Scale Software Development
Joseph Cottam, Joshua Hursey, and Andrew Lumsdaine, Indiana University, Bloomington, Indiana, USA

12:30 – 14:00  Lunch
14:00 – 15:30  SV for Maintenance  
(Chair: J. Hosking)
An Interactive Reverse-Engineering Environment for Large-Scale C++ Code
Alexandru Telea, University of Groningen, Netherlands; Lucian Voinea, SolidSource BV, Netherlands
A Catalogue of Lightweight Visualizations to Support Code Smell Inspection
Chris Parnin, Carsten Goerg, and Ogechi Nnadi, Georgia Institute of Technology, Atlanta, Georgia, USA
Classifying Desirable Features of Software Visualization Tools for Corrective Maintenance
Mariam Sensalire and Patrick Oqao, Makerere University, Uganda; Alexandru Telea, University of Groningen, Netherlands
Cluster Analysis of Java Dependency Graphs
Jens Dietrick, Vyacheslav Yakovlev, Catherine McCartin, and Graham Jenson, Massey University, Palmerston North, New Zealand; Manfred Duchrow, Consulting and Software, Germany

15:30 – 16:00  Break
16:00 – 17:30  SV Interaction and Layout  (Chair: J. Stasko)

GEF 3D — A Framework for Two-, Two-and-a-half-, and Three-Dimensional Graphical Editors
Jens von Pilgrim and Kristian Duske, FernUniversität Hagen, Germany

Automatic Layout of UML Use Case Diagrams
Holger Eichelberger, University of Hildesheim, Germany

Improving an Interactive Visualization of Transitions Systems
Bas Ploeger and Carst Tankink, Eindhoven University of Technology, Netherlands

VL/HCC Symposium & SoftVis  (Lobby)
18:30  VL/HCC & SoftVis Opening Reception and SoftVis Poster Session

The reception is open to all VL/HCC and SoftVis delegates. Others are invited to join the reception, however please sign up at the registration desk.

The SoftVis posters will be presented during the reception, which takes place in the Conference Centre Lobby. A list of accepted posters can be found below.

A Landscape Metaphor for Visualization of Software Projects
Amaia Aguirregoitia Martínez, J. Javier Dolado Cosín, and Concepción Presedo García, University of the Basque Country, Spain

A Metro Map Metaphor for Visualization of Software Projects
Amaia Aguirregoitia Martínez, J. Javier Dolado Cosín, and Concepción Presedo García, University of the Basque Country, Spain

Combining Software Visualization Paradigms to Support Software Comprehension Activities
Glauco de F. Carneiro, Rodrigo Magnavita, and Manoel Mendonça, Salvador University, Bahia - Brazil

Enhancing UML Sketch Tools with Digital Pens and Paper
Raimund Dachselt, Mathias Frisch, Eike Decker, Otto-von-Guericke-University Magdeburg, Germany

Texture-based Visualization of Metrics on Software Architectures
Heorhiy Byelas, Alexandru, Telea, University of Groningen, the Netherlands

Towards Seamless Semantic Zooming Techniques for UML Diagrams
Mathias Frisch and Raimund Dachselt, Otto-von-Guericke-University Magdeburg, Germany; Tobias Brückmann, University of Leipzig, Germany

VAST – Visualization of Abstract Syntax Trees within Language Processors Courses
Francisco J. Almeida-Martínez, Jaime Urquiza-Fuentesy, and J. Angel Velzquez-Iturbidez, Universidad Rey Juan Carlos, Spain

Visualizing the Computation Tree of the Tutte Polynomial
Bennett Thompson, David J. Pearce, and Craig Anslow, Victoria University of Wellington, New Zealand; Gary Haggard, Bucknell University, USA

Web Software Visualization Using Extensible 3D (X3D) Graphics
Craig Anslow, James Noble, and Stuart Marshall, Victoria University of Wellington, New Zealand; Robert Biddle, Carleton University, Canada
Wednesday, 17 September

VL/HCC Symposium & SoftVis

The following sessions are joint sessions of VL/HCC and SoftVis

08:00 – 09:00 Registration
09:00 – 09:15 Opening to VL/HCC
09:15 – 10:30 Joint VL/HCC & SoftVis Keynote Presentation (Chair: M. B. Rosson)
  John Stasko, Georgia Institute of Technology
  Visualization for Information Exploration and Analysis
10:30 – 11:00 Break
11:00 – 13:00 Visualization and Animation (Chair: A. Repenning)

The following papers are accepted for VL/HCC. Further information about the papers is available at the conference registration desk

**Exploring the Evolution of Software Quality with Animated Visualization**
  Guillaume Langelier, Houari Sahraoui & Pierre Poulin; Université de Montréal

**Flexible Visualization of Automatic Simulation based on Structured Graph Transformation**
  Enrico Biermann, Claudia Ermel, Jonas Hurrelmann & Karsten Ehrig; Technische Universität Berlin, Federal Institute for Materials Research and Testing, Berlin

The following papers are accepted for SoftVis. Further information about the papers is available at the conference registration desk

**Streamsight – A Visualization Tool for Large-Scale Streaming Applications**
  Wim De Pauw, Henrique Andrade & Lisa Amini, IBM T.J. Watson Research Center, Hawthorne, New York, USA

**Software Visualization for End-User Programmers: Trial Period Obstacles**
  Neeraja Subrahmaniyan, Margaret Burnett & Christopher Bogart, Oregon State University, Corvallis, Oregon, USA

13:00 – 14:30 Lunch

VL/HCC Symposium

14:30 – 16:00 End-User Programming I (Chair: A. Blackwell)

**What’s in a Mashup? And Why? Studying the Perceptions of Web-Active End Users**
  Nan Zang & Mary Beth Rosson; Pennsylvania State University

**End-User Programming in the Wild: A Field Study of CoScripter Scripts**
  Christopher Bogart, Margaret Burnett, Allen Cypher & Christopher Scaffidi; Oregon State University, IBM Research – Almaden, Carnegie Mellon University

**Using Scalable Game Design to Promote 3D Fluency: Assessing the AgentCubes Incremental 3D End-User Development Framework**
  Andri Ioannidou, Alexander Repenning & David Webb; AgentSheets, Inc., University of Colorado

16:00 – 16:30 Break
**16:30 – 18:30** Supporting Professional Programmers (Chair: M. Erwig)

*The Design of Khmer Word-based Predictive Non-QWERTY Soft Keyboard for Stylus-based Devices*
  Phavy Ouk, Ye Kyaw Thu, Mitsuji Matsumoto & Yoshiyori Urano; Waseda University

*Codetrail: Connecting Source Code and Web Resources*
  Max Goldman & Rob C. Miller; Massachusetts Institute of Technology

*Tool Support for Working with Sets of Source Code Entities (short)*
  Curtis Fraser, Chris Luce, Jamie Starke & Jonathan Sillito; University of Calgary

*Analyzing a Socio-Technical Visualization Tool Using Usability Inspection Methods (short)*
  Erik Trainer, Stephen Quirk, Cleidson de Souza & David Redmiles, University of California Irvine

*Towards the Next Generation of Bug Tracking Systems (short)*
  Sascha Just, Rahul Premraj & Thomas Zimmermann; Saarland University, University of Calgary

*The Design and Experimental Evaluation of a Tool to Support the Construction and Wizard-of-Oz Testing of Low Fidelity Prototypes (short)*
  Christopher Hundhausen, Stephen Trent, Anzor Balkar & Mohamed Nuur, Washington State University

---

**SoftVis**

14:30 – 16:00 SV for Design (Chair: W. De Pauw)

*Visualizing Inter-Dependencies Between Scenarios*
  David Harel and Itai Segall, Weizmann Institute of Science, Rehovot, Israel

*Visually Localizing Design Problems with Disharmony Maps*
  Richard Wettel and Michele Lanza, University of Lugano, Switzerland

*Stack-based Visualization of Out-of-Core Algorithms*
  Tony Bernardin, Brian Budge, and Bernd Hamann, University of California–Davis, USA

16:00 – 16:30 Break

16:30 – 17:45 SV Applications (Chair: E. Kraemer)

*Applying Visualisation Techniques in Software Product Lines*
  Daren Nestor, Steffen Thiel, Goetz Botterweck, Ciaran Cawley, and Patrick Healy, University of Limerick, Ireland

*Signature Visualization of Software Binaries*
  Thomas Panas, Lawrence Livermore National Laboratory, Livermore, California, USA

*Supporting the Understanding of the Evolution of Open Source Software Items*
  Roberto Theron, Antonio Gonzalez, and Francisco José García Peñalvo, University of Salamanca, Spain

*Rapid Visual Design with Semantics Encoding through 3d CRC Cards*
  Anthony Savidis, Foundation for Research and Technology Hellas, Heraklion, Crete, Greece

17:45 – 18:00 Final Words and Symposium Close

19:30 SoftVis Dinner

The banquet will take place at the restaurant of the conference centre.
Thursday, 18 September

VL/HCC Symposium (Großer Saal)

08:45 – 10:30 Domain-Specific Languages (Chair: A. Schürr)

EulerView: Article Organisation within the ACM Classification
   Rosario De Chiara & Andrew Fish; Università degli Studi di Salerno, University of Brighton

A Visual Language for Representing and Explaining Strategies in Game Theory
   Martin Erwig & Eric Walkingshaw; Oregon State University

A Domain Specific Visual Language for Design and Coordination of Supply Networks (short)
   John Hosking, Nikolay Mehandjiev & John Grundy; University of Auckland, University of Manchester

Visual Programming Language for Bit-Level Concurrent Programming: APECbits (short)
   Takashi Ajiro & Kensei Tsuchida; Toyo University

10:30 – 11:00 Break

11:00 – 12:30 Visual Programming Tools (Chair: P. Cox)

Dimension Inference in Spreadsheets
   Chris Chambers & Martin Erwig; Oregon State University

Test-Driven Goal-Directed Debugging in Spreadsheets
   Robin Abraham & Martin Erwig; Oregon State University

Unobtrusive Data Acquisition for Spreadsheet Research (short)
   Brian Bishop & Kevin McDaid; Dundalk Institute of Technology

Mashing Up Visual Languages and Web Mash-ups (short)
   M. Cameron Jones, Elizabeth F. Churchill & Michael B. Twidale; Yahoo! Research, University of Illinois at Urbana-Champaign

12:30 – 14:00 Lunch

14:00 – 15:30 End-User Programming II (Chair: M. F. Costabile)

Can Feature Design Reduce the Gender Gap in End-User Software Development Environments?
   Valentina Grigoreanu, Jill Cao, Todd Kulesza, Christopher Bogart, Kyle Rector, Margaret Burnett & Susan Wiedenbeck; Oregon State University, Drexel University

Enabling End-User Driven Business Process Composition through Programming by Example in a Collaborative Task Management System
   Todor Stoistev, Stefan Scheidl, Felix Flentge & Max Mühlhäuser; SAP Research, Technische Universität Darmstadt

End-User Development for Task Management: Survey of Attitudes and Practices
   Nikolay Mehandjiev, Todor Stoistev, Olaf Grebner, Stefan Scheidl & Uwe Riss; University of Manchester, SAP Research

15:30 – 16:00 Break
16:00 – 17:30 **Understanding and Supporting Designers**  
*(Chair: M. Burnett)*

*How Designers Design and Program Interactive Behaviors*
  Brad Myers, Sun Young Park, Yoko Nakano, Greg Mueller & Andrew Ko; Carnegie Mellon University

*Designers’ Natural Descriptions of Interactive Behaviors (short)*
  Sun Young Park, Brad Myers & Andrew Ko; Carnegie Mellon University

*A Case Study of API Redesign for Improved Usability (short)*
  Jeffrey Stylos, Benjamin Graf, Daniela K. Busse, Carsten Ziegler, Ralf Ehret & Jan Karstens; Carnegie Mellon University, SAP AG, SAP Labs

*Usability Challenges for Enterprise Service-Oriented Architecture APIs (short)*
  Jack Beaton, Sae Young Jeong, Yingyu Xie, Jeffrey Stylos & Brad Myers; Carnegie Mellon University

*Coordinated Queries: A Domain Specific Language for Exploratory Development of Multiview Visualizations (short)*
  Chris Weaver; Pennsylvania State University

18:00

Bus departs for VL/HCC Dinner

The banquet will take place at the Andechs Monastery and includes a visit to the Monastery Church and a beer tasting.
VL/HCC Symposium & Diagrams

The following sessions are joint sessions of VL/HCC and Diagrams

08:00 – 09:00 Registration
09:00 – 09:15 Welcome (opening to Diagrams)
09:15 – 10:30 Joint VL/HCC & Diagrams Keynote Presentation (Chair: M. Minas)
   Wilhelm Schäfer, University of Paderborn
   Model Driven Development with Mechatronic UML
10:30 – 11:00 Break
11:00 – 12:45 Diagram Aesthetics and Layout (Chair: P. Bottoni)
   The papers presented in this session are accepted for Diagrams. Further information about the papers is available at the conference registration desk
   General Euler Diagram Generation
      Peter Rodgers, Leishi Zhang & Andrew Fish
   Euler Diagram Decomposition
      Andrew Fish and Jean Flower
   Smooth Linear Approximation of Non-overlap Constraints
      Graeme Gange, Peter Stuckey & Kim Marriott
   Extremes are better: investigating mental map preservation in dynamic graphs
      Helen Purchase & Amanjit Samra
12:45 – 14:15 Lunch
14:15 – 15:30 Modeling and Graphs (Chair: J. Hosking)
   The papers presented in this session are accepted for VL/HCC. Further information about the papers is available at the conference registration desk
   Design-Time Simulation of Domain-Specific Models by Incremental Pattern Matching (short)
      István Ráth, Dávid Vágó & Dániel Varró; Budapest University of Technology and Economics
   Generic and Reflective Graph Transformations for the Checking and Enforcement of Modeling Guidelines
      Carsten Amelunxen, Elodie Legros & Andy Schürr; Technische Universität Darmstadt
   A Model-Driven Approach for the Visual Specification of Role-Based Access Control Policies in Web Systems
      Paloma Díaz, Ignacio Aedo, Daniel Sanz & Alessio Malizia; Universidad Carlos III de Madrid
15:30 – 16:00 Break
**VL/HCC Symposium**

16:00 – 17:30 **Tools for Interaction Design**

*Can Information Foraging Pick the Fix? A Field Study*

Joseph Lawrance, Rachel Bellamy, Margaret Burnett & Kyle Rector; Oregon State University, IBM Research - Hawthorne

*SpeechGraph – A Visual Programming Toolkit for Speech-Enabled Applications (short)*

Ednaldo Brigante Pizzolato & Agostinho Barone Ribeiro da Silva; Universidade Federal de São Carlos

*Collaborative End-User Development on Handheld Devices (short)*

Navid Ahmadi, Alexander Repenning & Andri Ioannidou; University of Lugano, AgentSheets, Inc.

*Auto-completion for Diagram Editors Based on Graph Grammars (short)*

Steffen Mazanek, Sonja Maier & Mark Minas; Universität der Bundeswehr München

*How Can Diagramming Tools Help Support Programming Activities? (short)*

Seonah Lee, Gail C. Murphy, Thomas Fritz & Meghan Allen; University of British Columbia

17:30 – 18:00 **Final Words and Symposium Close**

---

**Diagrams**

16:00 – 17:30 **Psychological and Cognitive Issues**

*An Eye-tracking Study of Exploitations of Spatial Constraints in Diagrammatic Reasoning*

Atsushi Shimojima and Yasuhiro Katagiri

*What Diagrams Reveal about Representations in Linear Reasoning, and How they Help*

Krista DeLeeuw and Mary Hegarty

*What Can Pictorial Representations Reveal about the Cognitive Characteristics of Autism?*

Maithilee Kunda and Ashok Goel

*Visual Thinking with an Interactive Diagram (short)*

Colin Ware, Anne Gilman and Robert Bobrow

18:30 **Evening Reception and Poster Session**

The reception is open to all Diagrams delegates. Others are invited to join the reception, however please sign up at the registration desk.

The posters will be presented in two slots during the reception, which takes place in the conference centre Lobby. A list of accepted posters and details on the slot in which they are presented can be found below.
Poster Session 1

Talk to the Hand: An Agenda for Further Research on Tactile Graphics
Frances Aldrich

Openproof - A Flexible Framework for Heterogeneous Reasoning
Dave Barker-Plummer, John Etchemendy, Albert Liu, Michael Murray and Nik Swoboda

Cognitive and Semantic Perspectives of Token Representation in Diagrams
Rossano Barone and Peter Cheng

Estimating Effort for Trend Messages in Grouped Bar Charts
Richard Burns, Stephanie Elzer and Sandra Carberry

Types and Programs from Euler Diagrams
James Burton

Diagrams in the UK National School Curriculum
Grecia Garcia Garcia and Richard Cox

LePUS3: An Object-Oriented Design Description Language
Epameinondas Gasparis, Jonathan Nicholson and Amnon Eden

Utilizing Feature Diagrams to Assess the Capabilities of Tools that Support the Model Driven Architecture
Benjamin Gorry

Diagrammatic knowledge-based tools for complex multi-dynamic processes
Ronald Grau and Peter Cheng

Supporting Reasoning and Problem-Solving in Mathematical Generalisation with Dependency Graphs
Sergio Gutierrez Santos, Darren Pearce, Eirini Geraniou and Manolis Mavrikis

A Concept Mapping Tool for Nursing Education
Norio Ishii and Saori Sakuma

Cognitive Methods for Visualizing Space, Time, and Agents
Angela Kessell and Barbara Tversky

Benefits of Constrained Interactivity in Using a Three-Dimensional Diagram
Peter Khooshabeh, Mary Hegarty and Madeleine Kehner

A Strategy for Drawing a Conceptual Neighborhood Diagram Schematically
Yohei Kurata
Poster Session 2

Supporting relational processing in complex animated diagrams
Richard Lowe and Jean-Michel Boucheix

Animated Cladograms: Interpreting Evolution from Diagrams
Camillia Matuk

Automatic Diagram Drawing based on Natural Language Text Understanding
Anirban Mukherjee and Utpal Garain

Texts and graphs elaboration: the effect of graphs’ examination on recall
Gisella Paoletti and Sara Rigutti

Diagrammatic Logic of Existential Graphs: A Case Study of Commands
Ahti-Veikko Pietarinen

Diagrammatic Reasoning in Separation Logic
M. Ridsdale, M. Jamnik, N. Benton and J. Berdine

Method of Minimal Representation: An alternative Diagrammatic technique for testing the validity of Categorical Syllogisms
Sumanta Sarathi Sharma

The Relationship between Graph Comprehension and Spatial Imagery: Support for an Integrative Theory of Graph Cognition
Brandie Stewart, Aren Hunter and Lisa Best

Using MusicXML to Evaluate Accuracy of OMR systems
Mariusz Szwoch

Aestheticization of flowcharts
Wioleta Szwoch

Towards Diagrammatic Patterns
Merete Skjelten Tveit

Visualizing Meaning: Literacy Materials for Dyslexic Children
Myra Thiessen

Diagrammatic Interrelationships Between Global and Local Algebraic Visual Objects: Communicating the Visual Abstraction
Julie Tolmie

School Curriculum Development to Promote Student Spontaneous Diagram Use in Problem Solving
Yuri Uesaka and Emmanuel Manalo
Saturday, 20 September

**Diagrams** *(Großer Saal)*

09:00 – 11:00  Tutorial  
Alan Blackwell

*Cognitive Dimensions of Notations: Understanding the Ergonomics of Diagram Use*

11:00 – 11:30  Break

11:30 – 13:00  Tutorial  
Beryl Plimmer and Tracy Hammond

*Getting Started With Sketch Tools: A Tutorial on Sketch Recognition Tools*

13:00 – 14:30  Lunch

14:30 – 15:45  Keynote Presentation  
John Etchemendy, Stanford University

*Heterogeneous Reasoning*

15:45 – 16:15  Break

16:15 – 17:35  Applications of Diagrams  
(Chair: R. Cox)

*Strategy Roadmaps: New Forms, New Practices*

  Alan Blackwell, Rob Phaal, Martin Eppler and Nathan Crilly

*VAST Improvements to Diagrammatic Scheduling using Representational Epistemic Interface Design*

  David Ranson and Peter Cheng

*Enhancing State-Space Tree Diagrams for Collaborative Problem Solving (short)*

  Steven Tanimoto

*Visual Programming with Interaction Net (short)*

  Abubaker Hassan, Ian Mackie and Jorge Sousa Pinto

18:30  Bus departs for Diagrams dinner

The banquet will take place at Mühlfelder Brauhaus and includes a brewery tour and beer tasting.
Sunday, 21 September

**Diagrams**  
(Großer Saal)

**09:00 – 11:00**  
**Theoretical Aspects**  
(Chair: N. Swoboda)

- *Spider Diagrams of Order and a Hierarchy of Star-Free Regular Languages*  
  Aidan Delaney, John Taylor and Simon Thompson

- *Diagrammatic Reasoning System with Euler Circles: Theory and Experiment Design*  
  Koji Mineshima, Mitsuhiro Okada, Ryo Takemura and Yuri Sato

- *A Normal Form for Euler Diagrams with Shading*  
  Andrew Fish, Chris John and John Taylor

- *Ensuring Generality in Formalizations of Euclid’s Diagrammatic Arguments*  
  John Mumma

- *Depicting Negation in Diagrammatic Logic: Legacy and Prospects (short)*  
  Fabien Schang and Amrouche Moktefi

**11:00 – 11:30**  
**Break**

**11:30 – 12:45**  
**Keynote Presentation**  
(Chair: M. Hegarty)


- *Rich Data Representation: Sophisticated Visual Techniques for Ease and Clarity*

**12:45 – 14:00**  
**Lunch**

**14:00 – 15:30**  
**Diagrams in Education**  
(Chair: A. Fish)

- *Transforming Descriptions and Diagrams to Sketches in Information System Design*  
  Barbara Tversky, James E. Corter, Jeffrey V. Nickerson, Doris Zahner & Yun Jin Rho

- *Graphical Revelations: Comparing Students’ Translation Errors in Graphics and Logic (short)*  
  Richard Cox, Robert Dale, John Etchemendy and Dave Barker-Plummer

- *Learning from Animated Diagrams: How are Mental Models Built?*  
  Richard Lowe and Jean-Michel Boucheix

- *Diagrams for the Masses: Raising Public Awareness - from Neurath to Gapminder and Google Earth*  
  Raul Niño Zambrano and Yuri Engelhardt

**15:30 – 15:50**  
**Break**

**15:50 – 17:20**  
**Understanding and Comprehension**  
(Chair: A. Blackwell)

- *Detection of Sample Differences from Dot Plot Displays*  
  Lisa Best, Laurence Smith and D. Alan Stubbs

- *Visualizing Non-subordination and Multidominance in Tree Diagrams: Testing Five Syntax Tree Variants*  
  Leonie M. Bosveld-de Smet and Mark de Vries

- *The Effects of Users’ Background Diagram Knowledge and Task Characteristics upon Information Display Selection*  
  Beate Grawemeyer and Richard Cox

- *Multimodal Comprehension of Graphics with Textual Annotations: The Role of Graphical Means Relating Annotations and Graph Lines (short)*  
  Cengiz Acarturk, Christopher Habel and Kursat Cagiltay

**17:20 – 17:30**  
**Final Words and Symposium Close**
VL/HCC Most Influential Papers

The VL/HCC community has begun a new tradition. Starting this year, 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, reviewed 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 1997, 1998, and 1999) and approximately two decades ago (in 1984, 1986, and 1987). 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 Margaret Burnett, Andy Schürr, and Steven Tanimoto.

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 2008.

Most Influential Paper from approximately two decades ago:
N. Monden, Y. Yoshino, M. Hirakawa, M. Tanaka, and T. Ichikawa:
HI-VISUAL: A Language Supporting Visual Interaction in Programming
1984 Workshop on Visual Languages

Abstract:
Visual icons can represent the objects of a system and, at the same time, the functions which they perform. Thus the visual icon works as a tool for specifying system functions, and makes it easier to develop the system itself. Furthermore, the system thus developed can also be activated by the use of visual icons.

In order to offer an environment which makes feasible the development of a system by the use of visual icons, it is necessary to provide a software tool which supports generation and interpretation of visual icons, and organization and evaluation of icon-based system performance. This can be regarded as a type of programming language.

This paper presents a language named HI-VISUAL which supports visual interaction in programming. Following a brief description of the language concept, the icon semantics and language primitives characterizing HI-VISUAL are extensively discussed. HI-VISUAL also shows a system extendability providing the possibility of organizing a high level application system as an integration of several existing subsystems, and will serve to developing systems in various fields of applications supporting simple and efficient interactions between programmer and computer.

Most Influential Paper from approximately one decade ago:
Mark Minas:
Diagram Editing with Hypergraph Parser Support
1997 IEEE Symposium on Visual Languages

Abstract:
Diagrams are always used when communicating complex situations. Diagram editors support the user when editing diagrams on a computer. However, creating diagram editors is expensive and time-consuming. Frameworks that can be customized for the specific diagram classes considerably reduce these costs. In previous work, the framework DiaGen using an internal hypergraph model and offering syntax-directed editing had been introduced. This paper presents an incremental hypergraph parser and an extension of DiaGen that allows for editing diagrams like in a drawing tool. The hypergraph parser detects correct (sub-) diagrams online and notifies the user of incorrect diagram parts. This allows editing with temporally inconsistent diagrams which supports a natural editing style.