



17TH IEEE INTERNATIONAL CONFERENCE ON PROGRAM COMPREHENSION – ICPC 2009

May 17-19, 2009
Vancouver, British Columbia, Canada

Sunday, May 17, 2009

9:00 – 9:05	ICPC 2009 Welcome
Room: Salon C	Session chair: Jerry Gannod
9:05 – 10:10	Keynote (joint session with MSR'09)
Room: Salon C	Session chair: Jim Whitehead
	Thomas Ball “A Brief History of Software -- from Bell Labs to Microsoft Research”
10:10 – 10:30	ICPC 2009 Posters - blitz presentations
Room: Salon C	Session chair: Romain Robbes
10:30 – 11:00	Break
11:00 – 12:30	Posters and Tool Demos (joint session with MSR'09)
Room: Salon C	Session chairs: Romain Robbes (ICPC) and Miryung Kim (MSR)
	ICPC 2009 Posters
	Design Pattern Directed Clustering for Understanding Open Source Code <i>Zhixiong Han, Linzhang Wang, Liqian Yu, Xin Chen, Jianhua Zhao, and Xuandong Li</i>
	A Bug You Like: A Framework for Automated Assignment of Bugs <i>Olga Baysal, Michael Godfrey, and Robin Cohen</i>
	Discovering Task-Based Concern Maps by Merging Concern Fragments <i>Sukanya Ratanotayanon and Susan Sim</i>
	Towards Pie Tree Visualization of Graphs and Large Software Architectures <i>Mireille Samia and Michael Leuschel</i>
	An Initial Study to Measure the Heartbeat of Program Comprehension Using Structure Traversal Graphs <i>Susan Elliott Sim, Sukanya Ratanotayanon, and Leyna Cotran</i>
	Enabling More Precise Dependency Analysis in Event-Based Systems <i>Daniel Popescu, Joshua Garcia, and Nenad Medvidovic</i>
	Observation of Open Source Programmers' Information Seeking <i>Khaironi Yatim Sharif and Jim Buckley</i>
	Creating and Maintaing Tutorials with DEFT <i>Andreas Bartho</i>
	Improving Program Comprehension by Enhancing Program Constructs: An Analysis of the Umple Language <i>Andrew Forward, Timothy C. Lethbridge, and Dusan Brestovansky</i> <i>Capturing Java Naming Conventions with First-Order Markov Models</i> <i>Erik Linstead, Lindsey Hughes, Cristina Lopes, and Pierre Bald</i>
	Automatic Detection of Internal Queues and Stages in Message Processing Systems Using Dynamic Program Analysis <i>Suman Karumuri and Steven Reiss</i>
	Task Board: Tracking Pertinent Task Artifacts and Plans <i>Chris Parnin, Carsten Gorg, and Spencer Rugaber</i>
	Program Complexity Analysis with Granular Hierarchical Structures <i>Benjapol Auprasert and Yachai Limpiyakorn</i>

Sunday, May 17, 2009 - continued

11:00 – 12:30	Posters and Tool Demos (joint session with MSR'09)	
Room: Salon C	Session chairs: Romain Robbes (ICPC) and Miryung Kim (MSR)	
	ICPC 2009 Tool Demos	
	OGAN: Visualizing Object Interaction Scenarios Based on Dynamic Interaction Context <i>Satoshi Munakata, Takashi Ishio, and Katsuro Inoue</i>	
	CRISTA -- Code Reading Implemented with Stepwise Abstraction <i>Daniel Porto, Manoel Mendonca, and Sandra Fabbri</i>	
	Kenyon-Web: Reconfigurable Web-based Feature Extractor <i>Sunghun Kim, Shivkumar Shivaji, and E. James Whitehead Jr.</i>	
	Prototyping Synchronization Policies for Existing Programs <i>Y. Huang, L. K. Dillon, and R. E. K. Stirewalt</i>	
	SourceMiner as an Experimental Platform to Characterize Software Comprehension Activities <i>Glauco Carneiro, Rodrigo Magnavita, and Manoel Mendonca</i>	
	SODBeans <i>Andreas Stefik, Andrew Haywood, Shahzada Mansoor, Brock Dunda, and Daniel Garcia</i>	
	Increasing Awareness of Function Usage Directives with eMoose <i>Uri Dekel</i>	
12:30 – 2:00	Lunch	
2:00- 3:30	Working Session 1	Working Session 2
	Room: MacKenzie	Room: Seymour
	Eye-Trackers as an Instrument for Evaluating Program Comprehension Methods <i>Yann-Gaël Guéhéneuc, Huzefa Kagdi, and Jonathan I. Maletic</i>	TDD: Too Dumb Developers? Implications of Test-Driven Development on Maintainability and Comprehension of Software <i>Marco Torchiano and Alberto Sillitti</i>
3:30 – 4:00	Break	
4:00- 5:30	Working Session 1 continued	Working Session 2 continued
	Room: MacKenzie	Room: Seymour
	Eye-Trackers as an Instrument for Evaluating Program Comprehension Methods <i>Yann-Gaël Guéhéneuc, Huzefa Kagdi, and Jonathan I. Maletic</i>	TDD: Too Dumb Developers? Implications of Test-Driven Development on Maintainability and Comprehension of Software <i>Marco Torchiano and Alberto Sillitti</i>

Monday, May 18, 2009

9:00 – 9:15	Welcome
Room: Salon B	Session chairs: Jerry Gannod, Rainer Koschke, Andrian Marcus
9:15 – 10:30	Keynote
Room: Salon B	Session chair: Andrian Marcus
	Václav Rajlich: "Intensions are a Key to Program Comprehension"
10:30 – 11:00	Break
11:00 – 12:30	Impact Analysis and Changes
Room: Salon B	Session chair: Timothy Lethbridge
	Variable Granularity for Improving Precision of Impact Analysis <i>Maksym Petrenko and Václav Rajlich</i>
	Automatically Identifying Changes that Impact Code-to-Design Traceability <i>Maen Hammad, Michael Collard, and Jonathan Maletic</i>
	Automatic Classification of Large Changes by Maintenance Categories <i>Abram Hindle, Daniel German, Mike Godfrey, and Ric Holt</i>

Monday, May 18, 2009 – continued

12:30 – 2:00	Lunch	
2:00- 3:30	Static Analysis	Cognitive and Other Issues
	Room: Salon B Session chair: Daqing Hou	Room: Salon C Session chair: Michael Godfrey
	<p>A Plethora of Paths <i>Eric Larson</i></p> <p>Practical Static Analysis for Inference of Safety-Related Program Properties <i>Yin Liu and Ana Milanova</i></p> <p>Impact Analysis and Visualization Toolkit for Static Crosscutting in AspectJ <i>Dehua Zhang, Ekwa Duala-Ekoko, and Laurie Hendren</i></p>	<p>BugFix: A Learning-Based Tool to Assist Developers in Fixing Bugs <i>Dennis Jeffrey, Min Feng, Neelam Gupta, and Rajiv Gupta</i></p> <p>Resumption Strategies for Interrupted Programming Tasks <i>Chris Parnin and Spencer Rugaber</i></p> <p>Using Activity Traces to Characterize Programming Behavior Beyond the Lab (Short) <i>Gail C. Murphy, Petcharat Viriyakattiyaporn, and David Shepherd</i></p> <p>An In-Vivo Study of the Cognitive Levels Employed by Maintenance Programmers During Software Maintenance (Short) <i>Tara Kelly and Jim Buckley</i></p>
3:30 – 4:00	Break	
4:00- 5:30	Short Paper 1	Short Papers 2
	Room: Salon B Session chair: Andy Zaidman	Room: Salon C Session chair: Andrew Ko
	<p>An Exploratory Study on Assessing Feature Location Techniques <i>Meghan Revelle and Denys Poshyvanyk</i></p> <p>Natural Language Parsing for Information Extraction from Source Code <i>Jens Nilsson, Welf Lowe, Johan Hall, and Joakim Nivre</i></p> <p>An Empirical Exploration of Regularities in Open-Source Software Lexicons <i>Derrin Pierret and Denys Poshyvanyk</i></p> <p>Vector Space Analysis of Software Clones <i>Scott Grant and James Cordy</i></p> <p>Identifying and Refining Design Elements for Proactive Copy-and-Paste Support via a Related Work Survey, Prototyping, and Code Clone Case Studies <i>Daqing Hou, Patricia Jablonski, and Ferosh Jacob</i></p> <p>Syntax Tree Fingerprinting for Source Code Similarity Detection <i>Michel Chilowicz, Etienne Duris, and Gilles Roussel</i></p>	<p>Methods for Selecting and Improving Software Clustering Algorithms <i>Mark Shtern and Vassilios Tzerpos</i></p> <p>Supporting Task-Oriented Navigation in IDEs with Configurable HeatMaps <i>David Rothlisberger, Oscar Nierstrasz, Stephane Ducasse, Damien Pollet, and Romain Robbes</i></p> <p>Concept Programs: Program Comprehension by Verification <i>Reinhard Schauer and Rudolf K. Keller</i></p> <p>Who Can Help Me with this Change Request? <i>Huzefa Kagdi and Denys Poshyvanyk</i></p> <p>Profile-Based Type Reconstruction for Decompilation <i>Katerina Dolgova, Alexander Chernov, and Alexander Fokin</i></p> <p>An Empirical Study on the Comprehension of Stereotyped UML Class Diagram Layouts <i>Bonita Sharif and Jonathan Maletic</i></p>
5:30 – 6:00	Open Steering Committee meeting – Annual report, Elections, ICPC 2010 preview Room: Salon B	
Evening	Banquet (Grouse Mountain)– Best Paper Award	

Tuesday, May 19, 2009

9:00 – 10:30	Visualization and Sonification
Room: Salon B	Session chair: Jonathan Maletic
	<p>Sonification Design Guidelines to Enhance Program Comprehension <i>Khaled Hussein, Eli Tilevich, SooBeen Kim, and Ivica Bukvic</i></p> <p>Trace Visualization for Program Comprehension: a Controlled Experiment <i>Bas Cornelissen, Andy Zaidman, Bart Van Rompaey, and Arie van Deursen</i></p> <p>Using Spoken Text to Aid Debugging: An Empirical Study <i>Andreas Stefik and Ed Gellenbeck</i></p>
10:30 – 11:00	Break
11:00 – 12:30	Features and Concerns
Room: Salon B	Session chair: Denys Poshyvanyk
	<p>Instrumenting Time-Sensitive Software for Feature Location <i>Dennis Edwards, Norman Wilde, Sharon Simmons, and Eric Golden</i></p> <p>Crosscutting Patterns and Design Stability: An Exploratory Analysis <i>Eduardo Figueiredo, Bruno Silva, Claudio Sant'Anna, Alessandro Garcia, Jon Whittle, and Daltro Nunes</i></p> <p>On the Role of Nouns in IR-based Traceability Link Recovery <i>Andrea De Lucia, Rocco Oliveto, Giovanni Capobianco, Annibale Panichella, and Sebastiano Panichella</i></p>
12:30 – 2:00	Lunch
2:00 – 3:30	Source Code Reading
Room: Salon B	Session chair: Jim Buckley
	<p>To CamelCase or Under_score <i>Dave Binkley, Marcia Davis, Dawn Lawrie, and Christopher Morrell</i></p> <p>Reading the Documentation of Invoked API Functions in Program Comprehension <i>Uri Dekel and James Herbsleb</i></p> <p>The Effectiveness of Source Code Obfuscation: an Experimental Assessment <i>Mariano Ceccato, Massimiliano Di Penta, Jasvir Nagra, Paolo Falcarin, Filippo Ricca, Marco Torchiano, and Paolo Tonella</i></p>
3:30 – 4:00	Break
4:00 – 5:30	Architecture and Design
Room: Salon B	Session chair: Yann-Gaël Guéhéneuc
	<p>Dn-based Architecture Assessment of Java Open Source Software Systems <i>Alexander Serebrenik, Serguei Roubtsov, and Mark van den Brand</i></p> <p>The Loss of Architectural Knowledge during System Evolution: An Industrial Case Study <i>Martin Feilkas, Daniel Ratiu, and Elmar Jürgens</i></p> <p>Standing on the Shoulders of Giants -- A Data Fusion Approach to Design Pattern Detection <i>Günter Kniesel and Alexander Binun</i></p>