

Science of Design Summer Workshop NSF CCF 0613822

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During the summer of 2007, four faculty members at Carnegie Mellon University hosted a design research summer school for students in the pre-proposal stage of their doctoral work.

The NSF-funded summer school was taught by Mary Shaw and Jim Herbsleb from the faculty of the Institute for Software Research in the School of Computer Science, Susan Finger from the faculty of Civil and Environmental Engineering and Institute of Complex Engineered Systems, and Mark D Gross from the School of Architecture in the College of Fine Arts. The summer school was funded by the NSF's "Science of Design" initiative as a "community building activity".

The summer school had two goals: The first goal was to help PhD students who are working in fields related to "Science of Design" to better understand strategies for conducting research on, in, and about design. The second goal of the summer school was to build a community of researchers working in various design domains by nurturing cross-disciplinary collaboration.

Faculty Talks I

Notation and Representation in Collaborative Object-Oriented Design: An Observational Study
 Jim Herbsleb
 Assessing Design Engineering Projects classes with Multi-disciplinary Teams (ADEPT)
 Susan Finger
 CoDraw
 Mark D Gross
 Predictive Evaluation of Design: the research plot
 Mary Shaw

Student Elevator Pitches

5-minute talks by each student on their design research interest

Faculty Talks II

A short story about the last (fifty) years of design research
 Mark D. Gross
 Design Research Strategies
 Susan Finger
 Empirical Methods in Design Research
 Jim Herbsleb
 Strategies for Design Research (how to read a research paper)
 Mary Shaw

Student Research Plan Critiques

visiting critics:
Ciera Jaspán, PhD student, Institute for Software Research in the School of Computer Science
Suguru Ishizaki, Associate Professor of Rhetoric and Communication Design at CMU.
David Kaufer, Head, Department of English
Jeremy J. Michalek, Assistant Professor of Mechanical Engineering
Eric Schweikardt, PhD student in the Computational Design
Dan Siewiorek, Buhl University Professor of Electrical and Computer Engineering and Computer Science and Director of the Human-Computer Interaction Institute

Guest Speaker

A conversation with **Dan Boyarski**
 Head - School of Design



Design Build Exercise



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Student Research Talks

A Cross Cultural Usability Study on the Internationalization of User Interfaces Based on an Empirical Five Factor Model Jo Chakraborty U. Maryland, Baltimore County
 High-throughput Computational Discovery of Biological Mechanism Scott Christley Notre Dame
 The Design of Classifications as Arguments Melanie Feinberg, Information School, U. Washington
 Research Argument of My Project David Gurzick, U., Baltimore County
 Design Language for the Simulation of Knowledge Flow Robert Judge, Claremont Graduate University
 An Evolutionary Environment to Enhance Creativity Yingdan Huang, U. Colorado, Boulder
 The Value of Design, Christopher LeDantec, Georgia Institute of Technology
 An analysis of social interaction design on user information experience in digital libraries Tony Moore, Drexel
 Integrating Modeling and Simulation in an Emergency Operations Center (EOC) will improve Emergency Management, Cindy Nikolai, Notre Dame
 Towards a Process Theory of Design for Software Intensive Systems, Paul Ralph, U. British Columbia
 Composition and Verification of Inter-organizational Business Processes in Web Services Environment Zhe (Jay) Shan, The Pennsylvania State University
 Ontology-Driven Information Systems at Development Time, Andrey Soares, Pennsylvania State University
 Information Visualization and Knowledge Mapping of Semi-structured and Hierarchical Data on the Web Roopali Wakhare, University of Arizona
 Georgia Computes, Sarita Yardi, Georgia Institute of Technology