ERIK H. TRAINER, PHD

University of California, Irvine
School of Information and Computer Science
(714) 606-3181 · etrainer@uci.edu · www.ics.uci.edu/~etrainer

EDUCATION

PhD, Information and Computer Science (GPA 3.97)	**UC Irvine**	**Sep. 2007-Dec. 2012**

- Advisor: David Redmiles
  - Dissertation: Supporting the Development of Trust in Globally Distributed Software Teams: The Impact of Visualized Collaborative Traces on Perceived Trustworthiness

MS, Information and Computer Science (GPA 3.89)	**UC Irvine**	**Sep. 2005-Jun. 2007**
BS, Information and Computer Science (GPA 3.6)	**UC Irvine**	**Sep. 2001-Jun. 2005**

RESEARCH INTERESTS

- Computer-supported Cooperative Work (CSCW)
- Human-Computer Interaction (HCI)
- Global Software Engineering (GSE)
- Trust
- Visual interface design
- Prototyping
- Interactive and collaborative interfaces

EXPERIENCE

Graduate Student Researcher	**UC Irvine**	**Sep. 2007-Dec. 2012**

- Showed, through proof-of-concept laboratory experiment and quantitative and qualitative analysis of experiment data, that a visual interface can support trust in globally distributed software teams.
- Designed, implemented, and evaluated Ariadne and Theseus (in Java, GWT), two interactive and collaborative visual interfaces to support awareness and the development of trust in globally distributed software teams.
- Disseminated tools and results through the publication of research papers (see below) and construction of posters that showcase the work.

Research Intern   **Microsoft Research**   **Jun. 2009-Sep. 2009**
Community Information Management group. Advisor: Catherine C. Marshall.
- Designed and implemented (in C#) the first prototype of *CIMBib*, a peer-to-peer application for sharing scholarly references (e.g., papers, bibliographies, and annotations) and replicating them among personal computing devices.

Teaching Assistant   **UC Irvine**   **Spring 2008 and 2009**
Information Visualization.
- Drafted homework assignments, led discussion sections, and graded students.

Student Ethnographer   **Qualitative Research Class**   **Jan. 2006-Mar. 2006**
- Performed a research study of street performers in Santa Monica, CA.
- Developed an interview protocol and interviewed 12 informants.
- Observed musical performers licensed by the city and interviewed them.
- Qualitatively analyzed interview data using techniques grounded in theory.
- Published a research report at the end of the school quarter.

OTHER WORK EXPERIENCE

Web Dev Intern   **WallStreet University, Inc**   **Sep. 2004-May 2009**
- Customized and deployed Moodle, an open-source course management system for integrating online educational investing materials.
- Managed the company's web development and programming team (4 people), as well as remote programming teams located at Cal State Fullerton, CA (2 people) and The University of the West, Rosemead, CA (1 person).
- Implemented front-end e-commerce shopping cart in PHP, Javascript and HTML.
- Developed 5 Adobe Flash courses with animation and action script.
- Wrote small PHP modules for company web site to handle customer mailing lists, course announcements, and conversion rates.

Intern   **Pilot Chemical Company**   **Jun. 2001-Sep. 2002**
- Initiated use of maintenance database software in the plant.
- Developed monthly spreadsheets documenting electric and gas usage.
- Reorganized and implemented material safety data sheets (MSDS) file system for the plant.
- Assisted plant manager in updating and computerizing ISO 9000 documents.
- Initiated work on Microsoft Access Database for the Customer Complaint system.

Intern   **Pac Comm Technologies**   **Jun. 2000-Sep. 2000**
- Collaboratively learned Java programming language with other interns.
- Designed and developed web pages and updated existing sections of the company web page.

TECHNOLOGY EXPERIENCE

Projects
- **Theseus** (http://www.ics.uci.edu/~etrainer/theseus). Web application with visualization widgets that keep globally distributed developers aware of their colleagues and promote the development of trust. Java, GWT.
- **Ariadne** (http://awareness.ics.uci.edu/~ariadne). Eclipse plug-in that visualizes the socio-technical network of a project, including inter-dependencies between software developers. Eclipse SDK, Java, JUNG, Protovis.

Languages and Technologies
- **Languages:** Java; C#; Javascript; C++; PHP; Flash Actionscript
- **Frameworks:** GWT (e.g., Google Chart Tools, GData: Google Contacts, Google Maps); Protovis; Prefuse, JUNG; Eclipse Plug-in Development and RCP; Yahoo! Developer Network
- **Protocols:** OAuth; Google IMAP Authentication; REST; SOAP; XML-RPC
- **Development Environments:** Eclipse; Visual Studio
- **Quantitative/Qualitative Analysis:** R; ATLAS.ti

PROFESSIONAL AFFILIATIONS

- Association of Computing and Machinery (ACM) **2005-present**
- Institute of Electrical and Electronics Engineers (IEEE) **2008-present**
- ACM Special Interest Group on Software Engineering (SIGSOFT) **2010-present**

GRANTS & AWARDS

- Department of Education (GAANN) Fellowship **2005-2011**
- IBM Jazz Innovation Grant (1 of 13 recipients) **2008**
- IBM Eclipse Innovation Grant **2005**
- UCI Undergraduate Research Opportunities Program (UROP) Funding **2005**

COMMUNITY SERVICE

Member, Program Committee **Feb. 2013**
- Reviewed papers for the 4th International Symposium on End-User Development (IS-EUD 2013).

Member, Program Committee **Feb. 2013**
- Reviewed papers for the 6th International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE 2013).

Undergrad Outreach Representative **Sep. 2010-Jul. 2011**
- Attended monthly meetings with ICS faculty and administrators.
- Designed fliers and posters for undergraduate recruitment.

Member, Organizing Committee for Grad Student Symposium **May 2008**

- Solicited graduate students to submit papers to the symposium.
- Organized hotel arrangements for speakers.

Reviewer   **May 2008**
- Reviewed papers for the 2008 Conference on Visual Languages and Human-Centric Computing (VL/HCC 2008).
- Reviewed Springer book chapter on Collaborative Software Engineering.
- Organized hotel arrangements for speakers.

Research Conference Volunteer   **Nov. 2005-Feb. 2010**
- Volunteered at the 2010 ACM Conference on Computer-Supported Cooperative Work (CSCW 2010).
- Volunteered at the 2005 IEEE/ACM Conference on Automated Software Engineering (ASE 2005).

Rhythm Guitarist   **Orange Solution**   **Jun. 2009-Sep. 2012**
- Played shows once per month at local venues, including Whisky a Go Go and Detroit Bar.
- Organized canned food drives (i.e. discount admission to shows with a non-perishable food item) in partnership with the Orange County Food Bank to help Orange County families in need.
- Donated more than 200 lbs of food.

CONFERENCE PUBLICATIONS

Al-Ani, B., Bietz, M., Wang, Y., Trainer, E., Koehne, B., Marczak, S., Redmiles, D.F., Prikladnicki, R. (2013): 'Globally Distributed System Developers: Their Trust Expectations and Processes', In Proceedings of the 2013 ACM Conference on Computer-supported Cooperative Work (CSCW 2013), pp. 563-573.

Al-Ani, B., Wang, Y., Marczak, S., Trainer, E., and Redmiles, D.F. (2012): 'Distributed Development Teams and Non-Use of the Web 2.0 Technologies: A Proclivity Framework', In Proceedings of the 2012 International Conference on Global Software Engineering (ICGSE 2012), pp. 104-113.

Wang, Y., Trainer, E., Al-Ani, B., Redmiles, D., and Marczak, S. (2012): 'Attitude and Usage of Collaboration Tools in GSE: A Practitioner Oriented Theory', In Proceedings of the 2012 International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE), held in conjunction with the 2012 International Conference on Software Engineering (ICSE 2012), 3 pp., in press.

Trainer, E. and Redmiles, D.F. (2012): 'Foundations for the Design of Visualizations that Support Trust in Distributed Teams', In Proceedings of the 2012 International Working Conference on Advanced Visual Interfaces (AVI 2012), pp. 34-41.

Al-Ani, B., Trainer, E., Redmiles, D.F., and Simmons, E. (2012): 'Trust and Surprise in Distributed Teams: Towards an Understanding of Expectations and Adaptations',

The 4th ACM International Conference on Intercultural Collaboration (ICIC 2012), pp. 97-106.

Al-Ani, B., Marczak, S., Trainer, E., Redmiles, D.F., and Prikladnicki, R. (2012): 'Distributed Developers' Perspectives of Web 2.0 Technologies in Supporting the Development of Trust', The Future of Collaborative Software Development Workshop, held in conjunction with the 2012 Conference on Computer-supported Cooperative Work (CSCW 2012).

Trainer, E., Al-Ani, B., and Redmiles, D.F. (2011): 'Impact of Collaborative Traces on Trustworthiness', In Proceedings of the 2011 International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE), held in conjunction with The 2011 International Conference on Software Engineering (ICSE 2011), pp. 40-47.

Trainer, E., Quirk, S., de Souza, C.R.B., and Redmiles, D.F. (2008): 'Analyzing a Socio-Technical Visualization Tool Using Usability Inspection Methods', In Proceedings of the IEEE Symposium on Visual Languages and Human Centric Computing (VLHCC 2008), pp. 78-81.

Trainer, E. and Redmiles, D.F. (2008): 'Towards an Infrastructure for Software Visualization Research', In First International Workshop on Infrastructure for Research in Collaborative Software Engineering (IReCoSE), held in conjunction with The 16th International Symposium on the Foundations of Software Engineering (FSE), available at http://home.segal.uvic.ca/~IRCoSE-2008/.

Al-Ani, B., Trainer, E., Ripley, R., Sarma, A., van der Hoek, A., Redmiles, D.F. (2008): 'Continuous Coordination within the Context of Cooperative and Human Aspects of Software Engineering', In Proceedings of the 2008 International Workshop on Cooperative and Human Aspects of Software Engineering (CHASE), held in conjunction with The 2008 International Conference on Software Engineering (ICSE 2008), pp. 1-4.

Trainer, E. (2008): 'Connecting the Social and Technical Aspects of Computing with Visualization', In Proceedings of the IEEE Symposium on Visual Languages and Human Centric Computing (VLHCC 2008), pp. 272-273.

de Souza, C.R.B., Quirk, S., Trainer, E., and Redmiles, D.F. (2007): 'Supporting Collaborative Software Development through the Visualization of Socio-Technical Dependencies', In Proceedings of the 2007 International ACM Conference on Supporting Group Work (GROUP 2007), pp. 147-156.

Al-Ani, B., Sarma, A., Bortis, G., Almeida da Silva, I., Trainer, E., van der Hoek, A., Redmiles, D. (2006): 'Continuous Coordination (CC): A New Collaboration Paradigm', In Proceedings of the 2006 Workshop on Supporting the Social Side of Large Scale Software Development, held in conjunction with the 2006 Conference on Computer-Supported Cooperative Work (CSCW 2006), pp. 4-10.

Trainer, E., Quirk, S., de Souza, C. R. B., Redmiles, D.F. (2005): 'Bridging the Gap between Technical and Social Dependencies with Ariadne', In Proceedings of the 2005 OOPSLA Workshop on Eclipse Technology Exchange, (OOPSLA ETX 2005), pp. 26-30.

de Souza, C.R.B., Dourish, P., Redmiles, D.F., Quirk, S., and Trainer, E. (2004): 'From Technical Dependencies to Social Dependencies', In Proceedings of the 2004 Workshop on Social Networks, held in conjunction with The 2004 Conference on Computer-Supported Cooperative Work (CSCW 2004), available at http://www.ischool.washington.edu/mcdonald/cscw04/

JOURNAL PUBLICATIONS

Al-Ani, B., Redmiles, D., van der Hoek, A., Alvim, M., da Silva, I., Mangano, N., Trainer, E., Sarma, A. (2008): 'Continuous Coordination within Software Engineering Teams: Concepts and Tool Support', *Journal of Computer Science and Engineering in Arabic, Special Issue on Software Engineering*, vol. 1, no. 3, 2008, pp. 10-33.

Redmiles, D., van der Hoek, A., Al-Ani, B., Hildenbrand, T., Quirk, S., Sarma, A., Silveira Silva Filho, R., de Souza, C., Trainer, E. (2007): 'Continuous Coordination: A New Paradigm to Support Globally Distributed Software Development Projects', *Wirtschaftsinformatik, Special Issue on the Industrialization of Software Development*, vol. 49, 2007, pp. 28-38.

BOOK CHAPTERS

Sarma, A., Al-Ani, B., Trainer, E., Silva Filho, R.S., da Silva, I., Redmiles, D., van der Hoek, A. Continuous Coordination Tools and their Evaluation, in I. Mistrík, J. Grundy, A. van der Hoek, J. Whitehead (eds.), Collaborative *Software Engineering*, Springer, Ch. 8, pp. 153-178.

TECHNICAL REPORTS

Trainer, E., Quirk, S., de Souza, C.R.B., and Redmiles, D.F. (2012): 'Usability Inspection Method-based Analysis of a Socio-Technical Visualization Tool', Technical Report UCI-ISR-12-6. University of California, Irvine, Institute for Software Research.

Trainer, E. and Redmiles, D.F. (2010): 'Initial Successes and Failures Prototyping Socio-technical Visualizations Using a Collaboration Infrastructure', Technical Report UCI-ISR-10-5. University of California, Irvine, Institute for Software Research.

Trainer, E. and Redmiles, D.F. (2009): 'A Survey of Visualization Tools that Promote Awareness of Software Development Activities', Technical Report UCI-ISR-09-5. University of California, Irvine, Institute for Software Research.