

Kenneth Mark Anderson

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Education

Ph.D., Information & Computer Science (1997)

University of California, Irvine
Advisor: Professor Richard N. Taylor

M.S., Information & Computer Science (1992)

University of California, Irvine

B.S., Information & Computer Science (1990)

University of California, Irvine

Professional Experience

Active Appointments	
Dates	Position
Spring 2016—Present	Professor, Department of Computer Science University of Colorado Boulder
Spring 2016—Present	Associate Dean for Education College of Engineering & Applied Science University of Colorado Boulder
Spring 2015—Present	Courtesy Faculty, Department of Information Science University of Colorado Boulder
Fall 2013—Present	Co-Director, Center for Software and Society University of Colorado Boulder
Spring 2010—Present	Faculty Fellow Alliance for Technology, Learning & Society (ATLAS) University of Colorado Boulder
Completed Appointments	
Fall 2005—Spring 2016	Associate Professor, Department of Computer Science University of Colorado Boulder
Spring 2010—Spring 2013	Associate Chair, Department of Computer Science University of Colorado Boulder
Summer 2005—Summer 2006	Visiting Associate Professor, Department of Computer Science University of Århus, Århus, Denmark
Summer 1998—Spring 2005	Assistant Professor, Department of Computer Science University of Colorado Boulder

Research Interests

Software Engineering, Software Architecture, Crisis Informatics, Hypermedia, Web Engineering, Web Application Infrastructure, Software Process, Scientific Workflow & Data Management

Administrative Duties & Strategic Activities

Associate Dean for Education (January 2016—Present): As the Associate Dean for Education, Prof. Anderson provides vision and leadership for placing CU Boulder's College of Engineering & Applied Science at the forefront of engineering education, including curriculum modernization, undergraduate student programs, enhanced-student success initiatives, and program assessment.

Leader of the Colorado Affiliate of the NCWIT Aspirations in Computing Award (Fall 2010—Present): Organizes the Colorado Affiliate of the NCWIT Aspirations in Computing Award and hosts the awards ceremony for this award at CU Boulder each Spring. This award recognizes the computing achievements of female high school students across Colorado and encourages these students to major in computing in college and pursue computing as a career. Hosted this award eight times and recognized over 400 young women (~250 winners; ~150 runners up) in that time. Worked with local tech companies to underwrite the costs of the awards event (and purchase prizes for the winners) bringing in nearly 90K in support of this important program since Fall 2010.

Associate Chair (January 2010—June 2013): Directly supervised department staff. Assisted Chair with strategic activities and management. Member of Executive Committee. Director, Undergraduate Studies.

Computer Science B.A. Degree Proposal, Review, and Implementation (Summer 2010—June 2013): Successfully led an effort to grow the Department's undergraduate program by creating a new B.A. degree in Computer Science for Fall 2013. The proposal received strong positive support from campus administration and was formally approved by the College of Engineering and Applied Science in Fall 2010; it was approved by the College of Arts and Sciences in May 2012 and was approved by the Regents of the University of Colorado in November 2012. Participated in the work to implement the degree program during the Spring 2013 semester. This degree program is incredibly popular. It's first class in Fall 2013 opened with ~240 students; this number grew to ~450 students in Fall 2014 and >600 students in Fall 2015.

Director of Undergraduate Studies (Fall 2008—Spring 2013): Chair of Undergraduate Committee.

Co-Chair of ABET Accreditation Effort (Fall 2008—Fall 2009): Led a comprehensive curriculum review of the undergraduate program, made adjustments to undergraduate policy, and contributed to the creation of the Department's ABET self-study report submitted in May 2009. Led process to create display materials (course profiles, course dossiers, coverage of program outcomes and objectives, assessment workflows, etc.) for the ABET site visit in September 2009. The Department received full accreditation in August 2010, backdated to October 2008, valid until September 2016.

Lead NCWIT (National Center for Women & IT) Pacesetters effort at CU Boulder (Fall 2009—Fall 2012): Founded CU Boulder's NCWIT Pacesetters team in order to join the first cohort of NCWIT Pacesetters in Fall 2009. Pacesetters is an effort to accelerate organizational change that leads to increased recruiting and retention of women in information technology programs such as computer science and ATLAS's Technology Arts & Media certificate. Pacesetter activities include increasing the integration of the computer science and ATLAS curricula, participating in the redesign of CS intro courses, and the creation of the B.A. in CS degree proposal. At the time, these efforts doubled the number of women enrolled in our BS degree program from 8% of majors in 2007 to 16% of majors in 2011.

Chair of CS Diversity Task Force (Fall 2006—Fall 2008): Founding Chair of the Department's Diversity Task Force. Led creation of high-quality recruiting materials for the B.S. degree program. Promoted the adoption of NCWIT best practices in undergraduate courses.

Research Funding

\$12.5M in research funds from NSF, DARPA, and other grants as either PI (\$3.71M) or Co-PI (\$8.8M).

- [17] **Improving Risk Communication and Reducing Vulnerabilities for Dynamic Tornado Threats in the Southeastern U.S.** NCAR PI: Julie Demuth; CU Boulder PI: Kenneth M. Anderson. Funding Agency: NOAA. Amount: \$15K of \$150K total grant. Duration: 10/01/2016-09/30/2018.
- [16] **CHS: Medium: Hyperlocal and Hypertemporal Information in Mass Emergencies Events: Next Generation Crisis Informatics Data Collection & Analytics.** PI: Kenneth M. Anderson; Co-PI: Leysia Palen, Jordan Boyd-Graber. Funding Agency: NSF. Amount: \$1.2M. Duration: 09/2016-08/2020.
- [15] **The Future of Geospatial Data: The Analytics and Implications of Open Source Mapping.** PI: Kenneth M. Anderson; Co-PI: Leysia Palen. Funding Agency: NSF. Amount: \$499,367. Duration: 09/2015-08/2018.
- [14] **Mining and Understanding Bug Fixes to Address Application-Framework Protocol Defects.** PI: Evan Chang; Co-PIs: Kenneth M. Anderson, Pavol Cerney, Sriram Sankaranarayanan, Tom Yeh. Funding Agency: DARPA. Amount: \$1.6M. Duration: 09/2014-08/2018.
- [13] **EXTREEMS - QED: Directions in Data Discovery (Data Cubed) in Undergraduate Education.** PI: Anne Dougherty; Co-PIs: Francois Meyer, Kenneth M. Anderson, Gunnar Martinsson. Funding Agency: NSF. Amount: \$590,336. Duration: 08/2014–07/2017.
- [12] **Hazards SEES Type 2: Hazard Prediction and Communication Dynamics in the Modern Information Environment.** PI: Rebecca Morss; Co-PIs: Chris Snyder, Christopher Davis, Heather Lazrus, Olga Wilhelmi; Funding Agency: NSF. Amount: \$3M. \$1.1M subcontract to CU: Leysia Palen, PI; Co-PI: Kenneth M. Anderson, James Martin, Martha Palmer. Duration: 09/2013–08/2017.
- [11] **INSPIRE: Automating Reasoning in Interpreting Climate Records of the Past.** PI: Elizabeth Bradley. Co-PIs: Kenneth M. Anderson, Jim White, Tom Marchitto. Funding Agency: NSF. Amount: \$642,815. Duration: 09/2012–08/2015.
- [10] **Enterprise Search Project.** PI: Kenneth M. Anderson. Funding Agency: Gates Corporation (Sponsored Research). Amount: \$149K. Duration: 7/2012–7/2013.
- [9] **HCC: Large: Collaborative Research: Widescale Computer-Mediated Communication in Crisis Response: Roles, Trust & Accuracy in the Social Distribution of Information.** PI: Leysia Palen. Co-PIs: Kenneth M. Anderson, Gloria Mark, James Martin, Douglas Sicker. Funding Agency: NSF. Amount: \$2.875M (\$2.396M CU; \$479K UC, Irvine). Duration: 09/2009–08/2013.
- [8] **Experimental Data Management for the Process Development and Integration Laboratory.** PI: Kenneth M. Anderson. Funding Agency: NREL. Amount: \$158K. Duration: 09/2008–12/2011.
- [7] **Event-Based Document Sensing for Insider Threats.** PI: Kenneth M. Anderson. Co-PIs: Alexander Wolf, Dennis Heimbigner, and Antonio Carzaniga. Funding Agency: ARDA. Amount: \$1.1M. Duration: 07/2003–06/2006. Direct Share of Funds: \$400K.
- [6] **ITR: Collaborative Research: Software for Interpretation of Cosmogenic Isotope Inventories - A Combination of Geology, Modeling, Software Engineering, and Artificial Intelligence.** PI: Marek Zreda and Elizabeth Bradley. Co-PI: Kenneth M. Anderson. Funding Agency: NSF. Amount: \$1.6 M. Duration: 09/2003–08/2008. Direct Share of Funds: \$485K.
- [5] **Materials Digital Library: MatDL.org.** Participating Scientist: Kenneth M. Anderson. (This is a subcontract on a Digital Libraries grant based out of Kent State University.) Funding Agency: NSF. Amount: \$750K. Duration: 09/2003–08/2005. Direct Share of Funds: \$20K.
- [4] **Machine Learning for Record Linkage.** Participating Scientist: Kenneth M. Anderson. Funding Agency: US Air Force. Amount \$30K. Duration: 02/2002–06/2002. Direct Share of Funds: \$30K.

- [3] **A Lightweight, Flexible, and Web-Based Approach to Supporting Workflow in Digital Libraries.** PI: Kenneth M. Anderson. Co-PI: Martin Ruzek. Funding Agency: NSF. Amount: \$476K. Duration: 09/2001–08/2003. Direct Share of Funds: \$325K.
- [2] **Supporting Information Integration in Large-Scale Software Development.** PI: Kenneth M. Anderson. Funding Agency: NSF. Amount: \$198K. Duration: 09/2000–08/2003. Direct Share of Funds: \$198K.
- [1] **Definition, Deployment, and Use of Gauges to Manage Reconfigurable Component-Based Systems (DASADA).** PI: Alexander L. Wolf. Co-PIs: Dennis Heimbigner, Kenneth M. Anderson, Andre van der Hoek. Funding Agency: DARPA. Amount: \$715K. Duration: 07/2000–06/2002. Direct Share of Funds: \$178

Additional Funding

\$310K in additional funding from various sources.

- [9] **Donations for Colorado Affiliate of the NCWIT Aspirations in Computing Award.** Amount: ~90K in support since Fall 2010.
- [8] **Gift-in-Kind Software Donation by Rally Software.** Amount: \$15.9K. Awarded: Fall 2015.
- [7] **Gift-in-Kind Software Donation by Rally Software.** Amount: \$14K. Awarded: Fall 2014.
- [6] **Gift from Godfrey Sullivan, CEO of Splunk Inc.** Amount: \$214K. Awarded: Spring & Fall 2013.
- [5] **Gift-in-Kind Software Donation by Rally Software.** Amount: \$20.58K. Awarded: August 2010.
- [4] **Gift-in-Kind Software Donation by Rally Software.** Amount: \$24K. Awarded: June 2010.
- [3] **Video Resources for the Lower Division Computer Science Curriculum.** PI: Clayton Lewis. Co-PIs: Kenneth M. Anderson, Dirk Grunwald, Shiv Mishra. Funding Agency: CU Chancellor's Faculty Award for Excellence in STEM Education. Amount: \$5.1K. Duration: 8/2009–05/2010.
- [2] **Northrop Grumman Travel Fund for Students Performing CyberSecurity Research.** Faculty Contacts: Douglas Sicker and Kenneth M. Anderson. \$1.4K. Received: Fall 2009.
- [1] **Improving the Atmosphere of the Computer Science Education Lab (CSEL) with a High-Definition Flat Panel Display.** PI: Kenneth M. Anderson. Funding Agency: CU's Engineering Excellence Fund. Amount: \$2K. Awarded: Fall 2006.

Keynotes

- [K1] "Towards Next-Generation Software Infrastructure for Crisis Informatics Research" Invited Keynote for the 3rd International Workshop on Social Web for Disaster Management, part of the 2015 World Wide Web Conference. May 2015.

Publications

[Google Scholar Profile](#)

Authors marked with an asterisk below were PhD student collaborators at the time of publication.

Refereed Journal Publications

- [J22] "‘sometimes da #beachlife ain't always da wave’: Understanding People's Evolving Hurricane Risk Communication, Risk Assessments, and Responses Using Twitter Narratives", by Julie Demuth, Rebecca Morss, Leysia Palen, Kenneth M. Anderson, Jennings Anderson*, Marina Kogan*, Kevin Stowe*, Melissa Bica*, Heather Lazrus, Olga Wilhelmi, Jen Henderson. *Weather, Climate and Society*, Volume 10, Number 3, pp. 537-560, June 2018.
- [J21] "The Crowd is the Territory: Assessing Quality in Peer-Produced Spatial Data During Disasters", by Jennings Anderson*, Robert Soden*, Brian Keegan, Kenneth M. Anderson, and Leysia Palen.

International Journal of Human-Computer Interaction, Vol 34, Issue 4 (Special Issue on Social Media in Crisis Management), pp. 295-310, January 2018.

- [J20] “Hazardous Weather Prediction and Communication in the Modern Information Environment”, by Rebecca Morss, Julie Demuth, Heather Lazrus, Leysia Palen, Michael Barton, Christopher Davis, Chris Snyder, Olga Wilhelmi, Kenneth Anderson, David Ahijevych, Jennings Anderson*, Melissa Bica*, Kathryn Fossell, Jennifer Henderson, Marina Kogan*, Kevin Stowe*, and Joshua Watts. *Bulletin of the American Meteorological Society*, pp. 2653-2674, December 2017.
- [J19] “Getting the Query Right for Crisis Informatics: Design Issues for Web-Based Analysis Environments”, by Mario Barrenechea*, Sahar Jambi*, Ahmet Arif Aydin*, Mazin Hakeem*, and Kenneth M. Anderson. *Journal of Web Engineering*, Volume 16. Issue 5-6. pp. 399-432, September 2017.
- [J18] “Crisis Informatics: New Data for Extraordinary Times”, by Leysia Palen and Kenneth M. Anderson. *Science*, 353(6296): 224-225, July 2016. DOI: 10.1126/science.aag2579.
- [J17] “Forensic Reasoning and Paleoclimatology: Creating a System That Works”, by Kenneth M. Anderson, Elizabeth Bradley, Laura Rassbach de Vesine*, Marek Zreda, and Chris Zweck. *Advances in Cognitive Systems*, 3(2014): 221-240, July 2014.
- [J16] “Architectural Implications of Social Media Analytics in Support of Crisis Informatics Research”, by Kenneth M. Anderson, Aaron Schram*, Ali Alzabarah*, and Leysia Palen. *IEEE Bulletin of the Technical Committee on Data Engineering*, 36(3), 13-20, September 2013.
- [J15] “The Theoretical Basis of ACE, an Age Calculation Engine for Cosmogenic Nuclides”, by Christopher Zweck, Marek Zreda, Kenneth M. Anderson, and Elizabeth Bradley. *Chemical Geology*. 291(1): 199-205, January 2012.
- [J14] “Providing Decision Support for Cosmogenic Isotope Dating”, by Laura Rassbach*, Elizabeth Bradley, and Kenneth M. Anderson. *AI Magazine*, 32(2): 69-78, Summer 2011.
- [J13] “Supporting ‘Everyday Analysts’ in Safety- and Time-Critical Situations”, by Leysia Palen, Sarah Vieweg*, and Kenneth M. Anderson. *The Information Society*, 27(1):52-62, January 2011.
- [J12] “Extending types to modeling problem-space entities”, by William Van Lenthien* and Kenneth M. Anderson. *New Review of Hypermedia and Multimedia*, 12(2): 1–22. December 2006.
- [J11] “Structural Templates and Transformations: The Themis Structural Computing Environment”, by Kenneth M. Anderson, Susanne A. Sherba*, and William V. Lenthien*. In *Special Issue on Structural Computing, Journal of Network and Computer Applications*, 26(1): 47–71. January 2003.
- [J10] “A View of Software Development Environments Based on Activity Theory”, by Paulo Barthelme* and Kenneth M. Anderson. In *Special Issue on Activity Theory and the Practice of Design, Computer-Supported Cooperative Work: Vol. 11, Nos. 1–2*, pp. 13–37. June 2002.
- [J09] “The Extensibility Mechanisms of the Chimera Open Hypermedia System”, by Kenneth M. Anderson. In *Special Issue on Hypermedia Extensibility Mechanisms and Scripting Languages, Journal of Network and Computer Applications*, 24(1): 75–86. January 2001.
- [J08] “Chimera: Hypermedia for Heterogeneous Software Development Environments”, by K. M. Anderson, R. N. Taylor, and E. J. Whitehead, Jr. In *ACM Transactions on Information Systems*, 18(3): 211–245. July 2000.
- [J07] “Supporting Software Engineering with Open Hypermedia”, by Kenneth M. Anderson. In *ACM Computing Surveys, Electronic Symposium on Hypermedia*, Vol. 31, Num. 4es. 5 pages. December 1999.
- [J06] “Issues of Data Scalability in Open Hypermedia Systems”, by Kenneth M. Anderson. In *Special Issue on Open Hypermedia Systems, The New Review of Hypermedia and Multimedia*, Vol. 5 (1999), pp. 151–178.

- [J05] “Addressing Interoperability in Open Hypermedia: The Design of the Open Hypermedia Protocol”, by Siegfried Reich, Uffe K. Wiil, Peter J. Nürnberg, Hugh C. Davis, Kaj Grønbaek, Kenneth M. Anderson, David E. Millard, and Jörg M. Haake. In *Special Issue on Open Hypermedia Systems, The New Review of Hypermedia and Multimedia*, Vol. 5 (1999), pp. 207–248.
- [J04] “Web-Based Development of Complex Information Products”, by Roy T. Fielding, E. James Whitehead, Jr., Kenneth M. Anderson, Gregory A. Bolcer, Peyman Oreizy, and Richard N. Taylor. In *Communications of the ACM*, 41(8): 84–92. August 1998.
- [J03] “A Critique of the Open Hypermedia Protocol”, by Kenneth M. Anderson, Richard N. Taylor, and E. James Whitehead Jr. In *Journal of Digital Information*, Vol. 1, Issue 2, 30 pages. Dec. 1997.
- [J02] “A Component- and Message-Based Architectural Style for GUI Software”, by Richard N. Taylor, Nenad Medvidovic, Kenneth M. Anderson, E. James Whitehead Jr., Jason E. Robbins, Kari A. Nies, Peyman Oreizy, and Deborah L. Dubrow, In *IEEE Transactions on Software Engineering*, 22(6): 390–406. June 1996.
- [J01] “Chiron-1: A Software Architecture for User Interface Development, Maintenance, and Run-Time Support”, by Richard N. Taylor, Kari A. Nies, Gregory A. Bolcer, Craig A. MacFarlane, Kenneth M. Anderson, and Greg F. Johnson. In *ACM Transactions on Computer-Human Interaction*, 2(2): 105–144. March 1995.

Refereed Conference Publications

- [C53] “Incorporating Context and Location Into Social Media Analysis: A Scalable, Cloud-Based Approach for More Powerful Data Science”, by Jennings Anderson*, Gerard Casas Saez*, Kenneth M. Anderson, Leysia Palen, and Rebecca Morss. *To appear in Hawaii International Conference on System Sciences*, January 2019.
- [C52] "Scaling Up or Scale-making? Examining Sociocultural Factors in a New Model for Engineering Mathematics Education", by Janet Y. Tsai, Kevin O'Connor, Beth A. Myers, Jacquelyn F. Sullivan, Derek T. Reamon, and Kenneth M. Anderson. In *ASEE Annual Conference & Exposition*, 25 pages, June 2018. <<https://peer.asee.org/30950>>
- [C51] “Examining the Replication—or Mutation—Processes of Implementing a National Model for Engineering Mathematics Education at a New Site”, by Janet Y. Tsai, Kevin O'Connor, Beth A. Myers, Jacquelyn F. Sullivan, Derek T. Reamon, and Kenneth M. Anderson. In *ASEE Annual Conference & Exposition*, 19 pages, June 2018. <<https://peer.asee.org/30472>>
- [C50] “Engineering Scalable Distributed Services for Real-Time Big Data Analytics”, by Sahar Jambi* and Kenneth M. Anderson. In *International Conference on Big Data Computing Service and Applications*, pp. 131-140, April 2017.
- [C49] “Batch to Real-Time: Incremental Data Collection & Analytics Platform”, by Ahmet Arif Aydin* and Kenneth M. Anderson. In *Hawaii International Conference on System Sciences*, pp. 5911-5920. January 2017.
- [C48] “Far Far Away in Far Rockaway: Responses to Risks and Impacts during Hurricane Sandy through First-Person Social Media Narratives”, by Jennings Anderson*, Marina Kogan*, Melissa Bica*, Leysia Palen, Kenneth M. Anderson, Kevin Stowe*, Rebecca Morss, Julie Demuth, Heather Lazrus, Olga Wilhelm, & Jennifer Henderson. In *International Conference on Information Systems for Crisis Response and Management*, 16 pages, May 2016.
- [C47] “Finding the Way to OSM Mapping Practices: Bounding Large Crisis Datasets for Qualitative Investigation”, by Marina Kogan*, Jennings Anderson*, Leysia Palen, Kenneth M. Anderson, & Robert Soden*. In *34th ACM Conference on Human Factors in Computing Systems*, pp. 2783-2795. May 2016. **(Acceptance rate: 23%)**
- [C46] “EPIC-OSM: A Software Framework for OpenStreetMap Data Analytics”, by Jennings Anderson*, Robert Soden*, Kenneth M. Anderson, Marina Kogan*, and Leysia Palen. In *Hawaii International Conference on System Sciences*, pp. 5468-5477. January 2016.

- [C45] “Getting the Query Right: User Interface Design of Analysis Platforms for Crisis Research”, by Mario Barrenechea*, Kenneth M. Anderson, Ahmet Arif Aydin*, Mazin Hakeem*, and Sahar Jambi*. In *15th International Conference on Web Engineering*, pp. 547-564. June 2015. *Nominated for Best Paper Award.*
- [C44] “Incremental Sorting for Large Dynamic Data Sets”, by Ahmet Arif Aydin* and Kenneth M. Anderson. In *First IEEE International Conference on Big Data Computing Service and Applications*, pp. 170-175. March/April 2015.
- [C43] “Tweet Local, Retweet Global: Retweeting by the Geographically-Vulnerable during Hurricane Sandy”, by Marina Kogan*, Leysia Palen, and Kenneth M. Anderson. In *18th ACM Conference on Computer-Supported Cooperative Work and Social Computing*, pp. 981-993, March 2015. **(Acceptance rate: 28%)**
- [C42] “Design Challenges/Solutions for Environments Supporting the Analysis of Social Media Data in Crisis Informatics Research”, by Kenneth M. Anderson, Ahmet Arif Aydin*, Mario Barrenechea*, Adam Cardenas*, Mazin Hakeem*, and Sahar Jambi*. In *Hawaii International Conference on System Sciences*, pp. 163-172, January 2015. *Nominated for Best Paper Award.*
- [C41] “Engineering Crowdsourcing for Disaster Events: The Human-Centered Development of a Lost-and-Found Tasking Environment”, by Mario Barrenechea*, Kenneth M. Anderson, Leysia Palen, and Joanne White*. In *Hawaii International Conference on System Sciences*, pp. 182-191, Jan. 2015.
- [C40] “Supporting Disaster Reconnaissance with Social Media Data: A Design-Oriented Case Study of the 2013 Colorado Floods”, by Shideh Dashti, Leysia Palen, Mehdi Heris*, Kenneth M. Anderson, Scott Anderson, and T. Jennings Anderson*. In *International Conference on Information Systems for Crisis Response and Management*, pp. 632-641, May 2014. *Nominated for Best Paper Award*
- [C39] “Mastering Social Media: An Analysis of Jefferson County’s Communications during the 2013 Colorado Floods”, by Lise St. Denis*, Leysia Palen, and Kenneth M. Anderson. In *International Conference on Information Systems for Crisis Response and Management*, pp. 737-746, May 2014.
- [C38] “Online Public Communications by Police & Fire Services during the 2012 Hurricane Sandy”, by Amanda Hughes*, Lise St. Denis*, Leysia Palen, and Kenneth M. Anderson. In *ACM Conference on Human Factors in Computing Systems*, pp. 1505-1514. April 2014. **(Acceptance rate: 23%)**
- [C37] “Digital Mobilization in Disaster Response: The Work & Self-Organization of On-Line Pet Advocates in Response to Hurricane Sandy”, by Joanne White*, Leysia Palen, and Kenneth M. Anderson. In *ACM Conference on Computer Supported Cooperative Work and Social Computing*, pp. 866-876. February 2014. **(Acceptance rate: 27%)**
- [C36] “MySQL to NoSQL: Data Modeling Challenges in Supporting Scalability”, by Aaron Schram* and Kenneth M. Anderson. In *2012 ACM Conference on Systems, Programming, Languages and Applications: Software for Humanity*, pp. 191-202. Tucson, Arizona, USA, October 2012. **(Acceptance rate: 26%)**
- [C35] “Representing Our Information Structures for Research and for Everyday Use - alt.chi”, by William Jones, Kenneth M. Anderson, and Steve Whittaker. In *Extended Abstracts of 2012 Conference on Human Factors in Computing Systems*, pp. 151-160, May 2012.
- [C34] “‘Beacons of Hope’ in Decentralized Coordination: Learning from On-the-Ground Medical Twitterers During the 2010 Haiti Earthquake”, by Aleksandra Sarcevic, Joanne White*, Leysia Palen, Kate Starbird*, Mossaab Bagdouri* and Kenneth M. Anderson. In *ACM Conference on Computer Supported Cooperative Work*, pp. 47-56, February 2012. **(Acceptance rate: 40%, after rigorous revise and resubmit process more typical of a journal than conference.)**
- [C33] “Blogs as a Collective War Diary”, by Gloria Mark, Leysia Palen, Mossaab Bagdouri*, Ban Al-Ani, James Martin and Kenneth M. Anderson. In *2012 ACM Conference on Computer Supported Cooperative Work*, pp. 37-46, February 2012. **(Acceptance rate: 40%, after rigorous revise and resubmit process more typical of a journal than conference.)**

- [C32] “NLP to the Rescue?: Extracting ‘Situational Awareness’ Tweets During Mass Emergency”, by Sudha Verma*, Will Corvey*, Sarah Vieweg*, Jim Martin, Leysia Palen, Martha Palmer, Aaron Schram* and Kenneth M. Anderson. In *5th International AAAI Conference on Weblogs and Social Media*, pp. 385-392, Barcelona, Spain, July 2011. **(Acceptance rate: 20%)**
- [C31] “Many Views, Many Modes, Many Tools & One Structure”, by William Jones and Kenneth M. Anderson. In *22nd ACM Conference on Hypertext and Hypermedia*, pp. 113–122, Eindhoven, The Netherlands, June 2011. **(Acceptance rate: 34%)**
- [C30] “Design and implementation of a data analytics infrastructure in support of crisis informatics research: NIER track”, by Kenneth M. Anderson and Aaron Schram*. In *33rd International Conference on Software Engineering*, pp. 844-847, Waikiki, Honolulu , HI, USA, May 2011. **(Acceptance rate: 23%)**
- [C29] “Policy Issues Facing the Use of Social Network Information During Times of Crisis”, by Douglas C. Sicker, Leysia Palen, Dirk Grunwald, Kenneth Mark Anderson, and Lisa Blumensaadt. In *38th Research Conference on Communication, Information and Internet Policy*, 15 pages, October 2010. <<http://ssrn.com/abstract=1989604>>.
- [C28] “Providing Decision Support for Cosmogenic Isotope Dating”, by Laura Rassbach*, Elizabeth Bradley, and Kenneth M. Anderson. In *22nd Conference on Innovative Applications of Artificial Intelligence (IAAI-10)*, pp. 1833–1838, July 2010.
- [C27] “End-to-end Support for Paleolandform Dating”, by Kenneth M. Anderson, Elizabeth Bradley, Laura Rassbach*, Christopher Zweck, and Marek Zreda. In *N. Adams, M. Berthold, and P. Cohen, editors, Advances in Intelligent Data Analysis IX: Proceedings of the 9th International Symposium on Intelligent Data Analysis. Springer LNCS*, pp. 171-183, May 2010.
- [C26] “A Vision for Technology-Mediated Support for Public Participation & Assistance in Mass Emergencies & Disasters”, by Leysia Palen, Kenneth M. Anderson, Gloria Mark, James Martin, Douglas Sicker, Martha Palmer, and Dirk Grunwald. In *Association of Computing Machinery and British Computing Society’s 2010 Conference on Visions of Computer Science*, April 2010. Article 8, 12 pages. **(Acceptance rate: 16%)**
- [C25] “Software Engineering Concerns in Tools for Expressing and Exploring Combinatorial Data”, by Daniel Korytina*, Kenneth M. Anderson and Glenn Murray. In *2009 International Conference on Software Engineering Research & Practice*, Vol. 1, pp. 57-63. Las Vegas, NV, USA. July 2009. **(Acceptance rate: 27%)**
- [C24] “Ad Hoc Structured Search over Complex, High-Throughput Data Sets expressed in a Restructurable, Integrated Form”, by Daniel Korytina*, Kenneth M. Anderson, Peter A. Graf, Wesley B. Jones and Glenn A. Murray. In *2009 International Conference on Information and Knowledge Engineering*, Vol. 1, pp. 143-150. Las Vegas, NV, USA. July 2009. **(Acceptance rate: 27%)**
- [C23] “Modeling Software Systems with Decidable Semantics: Implications on Software Quality Assurance”, by Kenneth M. Anderson and Steven Bucuvalas. In *2008 International Conference on Software Engineering Research & Practice*, pp. 95-101, Las Vegas, NV, USA. July 2008. **(Acceptance rate: 28%)**
- [C22] “Application of Open Hypermedia to Military Software”, by Kenneth M. Anderson. In *2008 International Conference on Software Engineering Research & Practice*, pp. 3-9, Las Vegas, NV, USA. July 2008. **(Acceptance rate: 28%)**
- [C21] “ACE: Age Calculation Engine—A Design Environment for Cosmogenic Dating Techniques”, by Kenneth M. Anderson, Elizabeth Bradley, Marek Zreda, Laura Rassbach*, Chris Zweck, and Evan Sheehan*. In *International Conference on Advanced Engineering Computing and Applications in Sciences (ADVCOMP’07)*, pp. 39-48, Papeete, Tahiti. November 4-9, 2007.

- [C20] “Towards Pervasive Traceability”, by Susanne A. Sherba* and Kenneth M. Anderson. In *2007 International Conference on Software Engineering Research and Practice (SERP'07)*, Vol. 1, pp. 85-94, Las Vegas, Nevada, USA. June 25-28, 2007.
- [C19] “Arguing about Radioisotope Dating”, by Laura Rassbach*, Elizabeth Bradley, Kenneth M. Anderson, Marek Zreda, and Chris Zweck. In *21st International Workshop on Qualitative Reasoning about Physical Systems*, pp. 132-141, Aberystwyth, UK, June 2007.
- [C18] “Towards Lightweight Structural Computing Techniques with the SmallSC Framework”, by Kenneth M. Anderson. In *2005 Symposium on Metainformatics, ACM International Conference Proceeding Series*, Vol. 214, Article 1, pp. 1-10, Esbjerg, Denmark. February 2007.
- [C17] “A Metainformatical View of Collections”, by William Van Lephthien* and Kenneth M. Anderson. In *2005 Symposium on Metainformatics, ACM International Conference Proceeding Series*, Vol. 214, Article 16, 166-176 pages, Esbjerg, Denmark. February 2007.
- [C16] “Templates and Queries in Contextual Hypermedia”, by Kenneth M. Anderson, Frank Allan Hansen*, and Niels Olof Bouvin. In *2006 ACM Conference on Hypertext*, pp. 99-110, Odense, Denmark. August 22-25, 2006. **Winner of the 2006 Engelbart Best Paper Award.**
- [C15] “Unifying Structure, Behavior, and Data with Themis Types and Templates”, by William Van Lephthien* and Kenneth M. Anderson. In *2004 ACM Conference on Hypertext*, pp. 256-265, Santa Cruz, CA, USA. August 9–13, 2004. **(Acceptance rate: 25%)**
- [C14] “The Materials Digital Library: MatDL.org”, by Laura M. Bartolo, Cecilia Robinson, Sharon C. Glotzer, Javed I. Khan, Adam C. Powell, Donald R. Sadoway, Kenneth M. Anderson, James A. Warren, Vinod Tewary, and Cathy S. Lowe. In *2004 Joint Conference on Digital Libraries*, page 398, Tucson, Arizona, USA, June 7-11, 2004.
- [C13] “Structure and Behavior Awareness in Themis”, by Kenneth M. Anderson, Susanne A. Sherba*, and William Van Lephthien*. In *2003 ACM Conference on Hypertext*, pp. 138–147, Nottingham, UK. August 26–30, 2003. **(Acceptance rate: 25%)**
- [C12] “Metis: Lightweight, Flexible, and Web-based Workflow Services for Digital Libraries”, by Kenneth M. Anderson, Aaron Andersen*, Neet Wadhvani*, and Laura M. Bartolo. In *2003 Joint Conference on Digital Libraries*, pp. 98–109, Houston, TX, USA. May 27–31 2003. **(Acceptance rate: 25%)**
- [C11] “Reconfiguration in the Enterprise JavaBean Component Model”, by Matthew J. Rutherford*, Kenneth M. Anderson, Antonio Carzaniga, Dennis Heimbigner, and Alexander L. Wolf. In *First International IFIP/ACM Working Conference on Component Deployment*, pp. 67–81, Berlin, Germany. June 20–21 2002.
- [C10] “Towards Large-Scale Information Integration”, by Kenneth M. Anderson, Susanne A. Sherba*, and William V. Lephthien*. In *24th International Conference on Software Engineering*, pp. 524–534, Orlando, FL, USA. May 19–25 2002. **(Acceptance rate: <15%)**
- [C09] “Achieving Survivability of Complex and Dynamic Systems with the Willow Framework”, by Alexander L. Wolf, Dennis Heimbigner, Antonio Carzaniga, Kenneth M. Anderson, and Nathan Ryan*. In *Working Conference on Complex and Dynamic Systems Architectures*, pp. 25-29. Brisbane, Australia. Dec. 2001.
- [C08] “Integrating Infrastructure: Enabling Large-Scale Client Integration”, by Kenneth M. Anderson, Christian Och*, Roger King, and Richard M. Osborne. In *2000 ACM Conference on Hypertext*, pp. 57–66, San Antonio, TX, USA. May 30–June 4 2000.
- [C07] “XLink and Open Hypermedia Systems: A Preliminary Investigation”, by Brent Halsey* and Kenneth M. Anderson. In *2000 ACM Conference on Hypertext*, pp. 212–213, San Antonio, TX, USA. May 30–June 4 2000.

- [C06] “Supporting Industrial Hyperwebs: Lessons in Scalability”, by Kenneth M. Anderson. In *21st International Conference on Software Engineering*, pp. 573–582, Los Angeles, CA, USA. May 16–22 1999. **(Acceptance rate: <15%)**
- [C05] “Data Scalability in Open Hypermedia Systems”, by Kenneth M. Anderson. In *ACM Conference on Hypertext*, pp. 27–36, Darmstadt, Germany. February 21–25 1999.
- [C04] “Integrating Open Hypermedia Systems with the World Wide Web”, by Kenneth M. Anderson. In *1997 ACM Conference on Hypertext*, pp. 157–166, Southampton, UK. April 6–11 1997.
- [C03] “Extending User-Interface Toolkits with Hypermedia Functionality”, by K. M. Anderson. In *30th Hawaii International Conference on System Sciences*, Vol. 6, pp. 197–207, Wailea, Hawaii, USA. Jan. 1997.
- [C02] “A Component- and Message-Based Architectural Style for GUI Software”, by Richard N. Taylor, Nenad Medvidovic, Kenneth M. Anderson, E. James Whitehead, Jr., and Jason E. Robbins. In *17th International Conference on Software Engineering*, pp. 295–304. Seattle, WA, USA. April 24–28 1995.
- [C01] “Chimera: Hypertext for Heterogeneous Software Environments”, by K. M. Anderson, R. N. Taylor, and E. J. Whitehead, Jr. In *1994 ACM Conference on Hypertext*, pp. 94–107, Edinburgh, Scotland. September 1994.

Book Chapters

- [BC04] “Promoting Structured Data in Citizen Communications During Disaster Response: An Account of Strategies for Diffusion of the ‘Tweak the Tweet’ Syntax”, by Kate Starbird*, Leysia Palen, Sophia B. Liu*, Sarah Vieweg*, Amanda Hughes*, Aaron Schram*, Kenneth M. Anderson, Mossaab Badgouri*, Casey McTaggart*, and Chris Schenk*. In *Christine Hagar (Ed.), Crisis Information Management: Communication and Technologies*, Cambridge, UK: Woodhead Publishing Limited. November 2011.
- [BC03] “Using Open Hypermedia to Support Information Integration”, by Kenneth M. Anderson and Susanne A. Sherba*. In *Lecture Notes in Computer Science*, Volume 2266, pp. 8–16, February 2002.
- [BC02] “Using Structural Computing to Support Information Integration”, by Kenneth M. Anderson and Susanne A. Sherba*. In *Lecture Notes in Computer Science*, Volume 2266, pp. 151–159, February 2002.
- [BC01] “Structural Computing Requirements for the Transformation of Structures and Behaviors”, by Kenneth M. Anderson. In *Lecture Notes in Computer Science*, Volume 1903, pp. 140–146, September 2000.

Edited Books and Journal Issues

- [EB02] Special Issue on Hypermedia Extensibility Mechanisms and Scripting Languages. Uffe K. Wiil and Kenneth M. Anderson, editors. In *Journal of Network and Computer Applications*, 24(1): 86 pages, January 2001.
- [EB01] Open Hypermedia Systems and Structural Computing. Proceedings of the 6th International Workshop on Open Hypermedia Systems and the 2nd International Workshop on Structural Computing. Siegfried Reich and Kenneth M. Anderson, editors. San Antonio, Texas, USA, May 30–June 4, 2000. In *Lecture Notes in Computer Science*, Volume 1903: 183 pages, Fall 2000.

Refereed Workshop Proceedings

- [W17] “Developing and Evaluating Annotation Procedures for Twitter Data during Hazard Events”, by Kevin Stowe*, Martha Palmer, Jennings Anderson*, Leysia Palen, Kenneth M. Anderson, Marina Kogan*, Rebecca Morss, Julie Demuth, and Heather Lazrus. In *Proceedings of the Joint Workshop on Linguistic Annotation, Multiword Expressions and Constructions held in conjunction with the International Conference on Computational Linguistics, August 2018*.

- [W16] “Improving Classification of Twitter Behavior During Hurricane Events” by Kevin Stowe*, Jennings Anderson*, Martha Palmer, Leysia Palen, and Kenneth M. Anderson. In *Proceedings of the Sixth International Workshop on Natural Language Processing for Social Media*, held with the Conference for the Association of Computational Linguistics (ACL), Melbourne, Australia, July 2018.
- [W15] “Identifying and Categorizing Disaster-Related Tweets” by Kevin Stowe*, Michael Paul, Martha Palmer, Leysia Palen, and Kenneth M. Anderson. In *Proceedings of the Fourth Workshop on Natural Language Processing for Social Media (SocialNLP); Part of the Conference on Empirical Methods in Natural Language Processing*, 6 pages, November 2016.
- [W14] “A Vision for Heart Rate Health Through Wearables” by Reem Albaghli* and Kenneth M. Anderson. In *Proceedings of the Workshop on Designing, Developing, and Evaluating the Internet of Personal Health, Part of the Adjunct Proceedings of the 2016 ACM International Joint Conference on Pervasive and Ubiquitous Computing*, pp. 1101-1105, September 2016.
- [W13] “Embrace the Challenges: Software Engineering in a Big Data World” by Kenneth M. Anderson. In *Proceedings of the 1st International Workshop on Big Data Software Engineering, Part of the 2015 International Conference on Software Engineering*, pp. 19-25, May 2015.
- [W12] “Places of Our Own for Digital Information: Building Structures that Work for Individuals and Small Groups” by William Jones, Steve Whittaker, and Kenneth M. Anderson. In *Proceedings of the 2012 Personal Information Management Workshop*, Part of the 2012 ACM Conference on Computer Supported Cooperative Work. 4 pages. February 2012.
- [W11] “Applications of Topics Models to Analysis of Disaster-Related Twitter Data”, by Kirill Kireyev*, Leysia Palen, and Kenneth M. Anderson. Neural Information Processing Systems Foundation Workshop. 4 pages, Seattle, WA, 2009.
- [W10] “A Framework for Mapping Traceability Relationships”, by Susanne A. Sherba*, Kenneth M. Anderson, and Maha Faisal*. In *Proceedings of the Second International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'03)*, Part of the 18th IEEE International Conference on Automated Software Engineering, Montreal, Quebec, Canada, October 7, 2003.
- [W09] “A Framework for Managing Traceability Relationships between Requirements and Architecture”, by Susanne A. Sherba* and Kenneth M. Anderson. In *Proceedings of the Second International Software Requirements to Architectures Workshop (STRAW'03)*, Part of the 2003 International Conference on Software Engineering, Portland, Oregon, USA. pp. 150–156. May 2003.
- [W08] “Configuration Management Culture as the Kernel to Success in Software Process Improvement Efforts”, by Thomas C. Green* and Kenneth M. Anderson. In *Proceedings of the 8th European Workshop on Software Process Technology*, Dortmund, Germany. June 2001.
- [W07] “Using XML to Support Information Integration”, by Kenneth M. Anderson and Susanne A. Sherba*. In *Proceedings of the International Workshop on XML Technologies and Software Engineering (XSE 2001)*, Part of the 2001 International Conference on Software Engineering, Toronto, Ontario, Canada. May 2001.
- [W06] “Supporting Project Awareness on the WWW with the iScent Framework”, by Kenneth M. Anderson and Niels Olof Bouvin*. In *Proceedings of the International Workshop on Awareness and the WWW*, Part of the 2000 ACM Conference on Computer-Supported Cooperative Work, Philadelphia, PA, USA. December 2000.
- [W05] “Software Engineering Requirements for Structural Computing”, by Kenneth M. Anderson. In *Proceedings of the First International Workshop on Structural Computing*, Part of the 1999 ACM Conference on Hypertext. Darmstadt, Germany. February 1999.
- [W04] “Client-Side Services for Open Hypermedia: Getting Past the 'foo'...”, by Kenneth M. Anderson. In *Proceedings of the Fourth International Workshop on Open Hypermedia Systems*, Part of the 1998 ACM Conference on Hypertext. Pittsburgh, PA, USA. June 1998.

- [W03] “A Critique of the Open Hypermedia Protocol”, by Kenneth M. Anderson. In *Proceedings of the Third International Workshop on Open Hypermedia Systems*, Part of the 1997 ACM Conference on Hypertext. Southampton, UK. April 1997.
- [W02] “Providing Automatic Support for Extra-Application Hypertext Functionality”, by Kenneth M. Anderson. In *Proceedings of the Second International Workshop on Incorporating Hypertext Functionality Into Software Systems*, Part of the 1996 ACM Conference on Hypertext. Washington D.C., USA. March 1996.
- [W01] “Fusing WWW and Link Server Technology: One Approach”, by E. James Whitehead, Jr., Roy T. Fielding, and Kenneth M. Anderson. In *Proceedings of the Second International Workshop on Open Hypermedia Systems*, Part of the 1996 ACM Conference on Hypertext, pp. 81–86. Washington D.C., USA. March 1996.

Technical Reports

- [TR01] “Enabling Project Awareness and Intersubjectivity via Hypermedia-Enabled Event Trails”, by Kenneth M. Anderson and Niels Olof Bouvin*. *Technical Report CU-CS-911-00*, Department of Computer Science, University of Colorado, Boulder. December 2000.

Posters & Demos

- [PD02] “InfiniTe: Hypermedia-Supported Information Integration”, by Kenneth M. Anderson and Susanne Sherba*. Poster/Demo Session. *2001 ACM Conference on Hypertext*. Aarhus, Denmark. August 2001.
- [PD01] “Chimera: An Open Hypermedia System for Software Engineering”, by Kenneth M. Anderson. Demo Session. *1993 ACM Conference on Hypertext*. Seattle, WA, USA. November 1993.

Abstracts

- [AB04] “Contributor-Centric OpenStreetMap Research”, by Jennings Anderson*, Kenneth M. Anderson, Leysia Palen, and Mikel Maron. Association of American Geographers, Annual Meeting. April 2017.
- [AB03] “A Real Need for Real-Time OpenStreetMap Analytics”, by Jennings Anderson*, Robert Soden*, Kenneth M. Anderson, Marina Kogan*, and Leysia Palen. Association of American Geographers, Annual Meeting. April 2016.
- [AB02] “The Social Life of OpenStreetMap: What Can We Know from the Data? New Tools and Approaches”, by Robert Soden*, Jennings Anderson*, Marina Kogan*, Mikel Maron, and Kenneth M. Anderson. Association of American Geographers, Annual Meeting. April 2015.
- [AB01] “iCRONUS meets CRONUS-Earth: Improved Calculations for Cosmogenic Dating Methods - From Neutron Intensity to Previously Ignored Correction Factors”, by Zreda, M., Desilets, D., Li, Y., Bradley, E., and Anderson, K.M. *Geochimica et Cosmochimica Acta Supplement*, Vol. 69, Issue 10, Supplement 1, Goldschmidt Conference Abstracts, p.A168. May 2005.

Research Systems

FixrDB: Data Processing Pipeline for Android-Related GitHub Repositories, version 1.0-2.0

Principal Designer and Developer; This system is used to process tens of thousands of GitHub repositories containing millions of files across hundreds of thousands of commits and extracting features that enable bug detection and relevant code search. Implemented first as a set of programs on top of Apache Spark; Reimplemented for incremental processing in Elixir. Fall 2015—Present.

epic-osm: Framework for OpenStreetMap Analysis, version 1.0

Contributing Designer (with Ph.D. students T. Jennings Anderson, Robert Soden, and Marina Kogan). This framework is in active use by the OpenStreetMap Community; It has been released on GitHub under an open source license: <<https://github.com/Project-EPIC/epic-osm>>. Fall 2014—Present.

EPIC Analyze: Twitter Data Analytics Environment, version 1.0

Contributing Designer (with Ph.D. students Ahmet Arif Aydin, Mario Barrenechea, Adam Cardenas, Mazin Hakeem, and Sahar Jambi). This analysis environment for large Twitter data sets is in active use internally at Project EPIC. Fall 2013—Present.

Facebook Data Collection System, version 1.0

Principal Designer and Developer; This system is used internally by Project EPIC to collect the posts of public Facebook pages/groups. Fall 2013—Present.

EPIC Collect: Twitter Data Collection Framework, versions 1.0–2.0

Contributing Designer (with Ph.D. student Aaron Schram). This system is used internally by Project EPIC to collect billions of tweets for crisis informatics research. Spring 2010—Present.

ACE: Cosmogenic Dating Environment, versions 1.0–3.0

Principal Designer and Developer. Design environment for geoscientists who perform research on cosmogenic nuclide dating. Released as open source at: <<http://cosmos2.hwr.arizona.edu/ace/>>. ACE was used by that research community for many years after research project ended. Spring 2003—Summer 2008.

EventTrails Insider Threat Detection Environment, version 1.0

Principal Designer and Developer; Prototype software developed for ARDA; used internally for research and experimentation. Summer 2003-Summer 2006.

Metis Workflow Management System (for Digital Libraries), versions 1.0–1.2

Principal Designer and Developer. Prototype software developed for NSF; used internally for research and experimentation. Fall 2003-Summer 2005.

InfiniTe: Information Integration Environment, version 1.0

Principal Designer. Prototype software used internally for research and experimentation; Spring 2002-Summer 2005.

Themis Structural Computing Environment, versions 1.0–2.0

Principal Designer. Prototype software used internally for research and experimentation; Spring 2002-Summer 2005.

Chimera Open Hypermedia System, versions 1.0–4.0

Principal Designer and Developer. Prototype software developed for DARPA and NSF; used internally for research and experimentation; deployed briefly at Northrop Grumman as part of the evaluation work of my PhD dissertation. Summer 1993—Summer 2005.

C2 Architectural Style

Participated in design of the C2 architectural style; work performed as graduate student at UCI. Implemented Ada components in initial C2 demo. 1990-1993.

Chiron-1 User Interface Development System

Participated in design of client architecture; work performed as undergraduate and graduate student at UCI. Implemented several Chiron-1 development tools and artists. 1989-1993.

Selected Presentations		
Title	Forum	Date
Towards Next-Generation Software Infrastructure for Crisis Informatics Research	ACM SIGSOFT Webinar	October 2015
Embrace the Challenges: Software Engineering in a Big Data World	1st International Workshop on Big Data Software Engineering	May 2015

Selected Presentations		
Title	Forum	Date
Towards Next-Generation Software Infrastructure for Crisis Informatics Research	Keynote , 3rd International Workshop on Social Web for Disaster Management	May 2015
Design Challenges/Solutions for Environments Supporting the Analysis of Social Media Data in Crisis Informatics Research	2015 Hawaii International Conference on System Sciences	January 2015
Using Cassandra to Support Crisis Informatics Research	2014 Cassandra Day in Denver	October 2014
EPIC Analyze: Lessons Learned Analyzing Large Twitter Datasets in Support of Crisis Informatics Research	Leeds Business Analytics Conference	September 2014
Big Data Crisis Informatics: Challenges in Software Design, Data Modeling, and Analysis	Participatory Information Technology at Aarhus University	June 2014
Supporting Disaster Reconnaissance with Social Media Data: A Design-Oriented Case Study of the 2013 Colorado Floods	International Conference on Information Systems for Crisis Response and Management	May 2014
Big Data & Disasters: How You Can Help	TedxCU	April 2014
Big Data in Crisis Informatics: Project EPIC's Analytics Infrastructure	2013 CU Leeds Business Analytics Forum	November 2013
MySQL to NoSQL: Data Modeling Challenges in Supporting Scalability	2012 ACM Conference on Systems, Programming, Languages and Applications: Software for Humanity	October 2012
Design and implementation of a data analytics infrastructure in support of crisis informatics research: NIER track	2011 International Conference on Software Engineering	May 2011
A Vision for Technology-Mediated Support for Public Participation & Assistance in Mass Emergencies & Disasters	2010 ACM/BCS Visions of Computer Science Conference	April 2010

Panels

Exploiting "Big Data" in Collaboration Initiatives Panel at the 2012 International Conference on Collaboration Technologies and Systems (CTS 12). May 23, 2012.

Teaching Experience						
Major Courses (does not include independent studies)						
Semester	CSCI	Title	Ugrads	Grads	Course Rating (out of 6)	Instructor Rating (out of 6)
Spring 2019	No teaching due to teaching load reduction for being CEAS Associate Dean for Education					
Fall 2018	No teaching due to teaching load reduction for being CEAS Associate Dean for Education					
Spring 2018	CSCI 5828	Foundations of Software Engineering		29	5.2	5.4
Fall 2017	No teaching due to teaching load reduction for being CEAS Associate Dean for Education					
Spring 2017	No teaching due to teaching load reduction for being CEAS Associate Dean for Education					
Fall 2016	CSCI 5828	Foundations of Software Engineering		52	4.95	5.25
Spring 2016	No teaching due to teaching load reduction for being CEAS Associate Dean for Education					
Fall 2015	CSCI 5828	Foundations of Software Engineering		42	5.5	5.3
Summer 2015	CSCI 5828	Foundations of Software Engineering (CAETE)		2	6.0	6.0
	CSCI 5448	Object-Oriented Analysis & Design (CAETE)		7	5.5	5.5
Spring 2015	CSCI 4830/7000	Data Engineering	26	11	4.8	5.4
	CSCI 5448	Object-Oriented Analysis & Design (CAETE)		5	5.0	5.0
Fall 2014	5828	Foundations of Software Engineering		46	5.2	5.4
Spring 2014	No teaching due to sabbatical					
Fall 2013	No teaching due to sabbatical					
Spring 2013	No teaching due to teaching load reduction for leading the implementation of the BA in CS degree to allow first cohort of students to enroll for Fall 2013.					
Fall 2012	4448/5448	Object-Oriented Analysis & Design	48	50	5.1	5.5
Spring 2012	5828	Foundations of Software Engineering		49	5.1	5.5

Teaching Experience						
Major Courses (does not include independent studies)						
Semester	CSCI	Title	Ugrads	Grads	Course Rating (out of 6)	Instructor Rating (out of 6)
Fall 2011	4448/5448	Object-Oriented Analysis & Design	53	40	5.2	5.6
Spring 2011	4448/5448	Object-Oriented Analysis & Design	55	39	5	5.3
Fall 2010	No teaching due to teaching load reduction					
Summer 2010	5448	Object-Oriented Analysis & Design (CAETE)		4	5.3	6
Spring 2010	5828	Foundations of Software Engineering		32	5.4	5.4
Fall 2009	4448/5448	Object-Oriented Analysis & Design	42	32	4.9	5.2
Spring 2009	5828	Foundations of Software Engineering		35	4.9	5.1
Fall 2008	4448/6448	Object-Oriented Analysis & Design	30	16	5.3	5.6
	7818	Seminar on Web Services	3	11	5.1	5.5
Spring 2008	5828	Foundations of Software Engineering		34	5.1	5.6
Fall 2007	4448/6448	Object-Oriented Analysis & Design	31	23	4.8	5
Spring 2007	5828	Foundations of Software Engineering		40	4.3	4.9
Fall 2006	3308	Software Methods and Tools	39		4.7	4.9
	7818	Seminar on Web Services	2	8	4.9	5.4
Spring 2006		Hypermedia (Aarhus University)	40		N/A	N/A
		Web Services (Aarhus University)		9	N/A	N/A
Fall 2005	No teaching due to sabbatical					
Spring 2005	4448/6448	Object-Oriented Analysis & Design	28	38	5.4	5.6
Fall 2004	3308	Software Methods and Tools	37		5.2	5.4
Spring 2004	No teaching due to parental leave					

Teaching Experience						
Major Courses (does not include independent studies)						
Semester	CSCI	Title	Ugrads	Grads	Course Rating (out of 6)	Instructor Rating (out of 6)
Fall 2003	3308	Software Methods and Tools	59		4.7	4.7
Spring 2003	6448	Object-Oriented Analysis & Design		43	<i>Scores not available prior to Fall 2003</i>	
Fall 2002	3308	Software Methods and Tools	78			
Spring 2002	6448	Object-Oriented Analysis & Design		46		
Fall 2001	3308	Software Methods and Tools	81			
	7818	Next-Generation Web Technologies		15		
Spring 2001	6448	Object-Oriented Analysis & Design		63		
Fall 2000	3308	Software Methods and Tools	51			
	7818	XML Tools, Techniques & Standards		12		
Spring 2000	5828	Foundations of Software Engineering		48		
Fall 1999	7818	Open Hypermedia		9		
Spring 1999	5828	Foundations of Software Engineering		68		
Fall 1998	6448	Object-Oriented Analysis & Design		47		
Winter 1998		Intro. Software Eng. (at UC Irvine)	94			
Total:			797	1000		

Students

Ph.D. Students

Name	Started	Status / Completed	Location
Afnan Aldahri	Fall 2016	In Progress	CU Boulder
Rsha Mizra	Fall 2015	In Progress	CU Boulder
Reem Albaghli	Fall 2014	Spring 2018	Kuwait University

Name	Started	Status / Completed	Location
Mazin Hakeem	Spring 2013	In Progress	CU Boulder
Sahar Jambi	Spring 2012	Fall 2016	Twitter
Ahmet Arif Aydin	Fall 2013	Summer 2016	Inonu University
Mario Barrenechea	Fall 2011	Spring 2016	NVBots
Ali Alzabarah	Spring 2011	Spring 2014	Twitter
Aaron Schram	Spring 2010	Spring 2015	CTO, Sopris Health
William Van Lepthien	Fall 2003	Spring 2010	Digital Globe
Susanne Sherba	Fall 2001	Spring 2005	University of Denver
Maha Faisal	Fall 2001	Spring 2005	Kuwait University
Thomas C. Green	Spring 2001	Spring 2003	Practical Process

M.S. Students

Gerard Casas Saez, M.S., **In progress**
Kelvin Kosbab, M.S., **December 2014**
Amrutha Rajiv, M.S., **May 2013**
Anu Sundaravel, M.S., **December 2010**
Matthew Novinger, M.S., **May 2010**
Chris Baker, M.S., **May 2010**
Scott Mackey, M.S., **December 2009**
AJ Lindell, M.S., **May 2009**
Shibani Basava, M.S., **May 2008**
Gary Knoll, M.S., **December 2007**
Jess Murphy, M.S., **December 2006**
Jeffrey Palm, M.S., **May 2003**
William Van Lepthien, M.S., **May 2003**
Neet Wadhvani, M.S., **May 2003**

M.E. Students

Jesse Bowes, M.E., **Summer 2016**
Mike Johnson, M.E., **December 2012**
Russ Winkler, M.E., **May 2012**
Matt Jung, M.E., **May 2011**
Jason La Bumbard, M.E., **May 2009**
Michael Pratt, M.E., **May 2009**
Lee Gerakos, M.E., **May 2005**
Aaron Andersen, M.E., **July 2003**
Edmon Begoli, M.E., **May 2003**
Nathan Blair, M.E., **May 2003**
Song Yang, M.E., **December 2000**
Suzanne Pherigo, M.E., **May 1999**

Undergraduate Senior Thesis

Gerard Casas Saez, Undergraduate Senior Thesis, **Summer 2017**
Trystan Binkley-Jones, Undergraduate Senior Thesis, **May 2015**
Alexia Newgord, BA Honors Senior Thesis, **May 2015**
Devon Tivona, Undergraduate Senior Thesis, **May 2014**
Eric Horacek, Undergraduate Senior Thesis, **May 2013**
Jeff Taggart, Undergraduate Senior Thesis, **December 2011**
Robert Stimpfling, Undergraduate Senior Thesis, **December 2010**
Ransom Christofferson, Undergraduate Senior Thesis, **December 2009**

Dissertation

Pervasive Hypermedia, June, 1997

Dr. Pedro Szekely, USC/ISI
Dr. Jonathan Grudin, UCI
Dr. Richard N. Taylor (Chair), UCI

Abstract

The heterogeneity of modern computing environments contributes to the information overload experienced by users. Relationships within and between applications, documents, and processes are often implicit and must be managed and tracked by the user. Hypermedia has been put forward as one approach to organizing these relationships, making them explicit so they can be managed. One approach to providing environment-wide hypermedia services is through the use of open hypermedia systems (OHSs). OHSs are open with respect to the set of systems and information over which hypermedia services can be provided. This research area contrasts with the original approach to hypermedia services which involved developing monolithic systems with a closed set of supported data types (e.g. HyperCard). Given the existence of OHSs, another area of research is developing integration techniques such that applications which existed before the introduction of an OHS can take advantage of the hypermedia services provided by the OHS. This dissertation provides contributions in both of these research fields.

In particular, this work demonstrates techniques which enable OHSs to address the heterogeneity of their computing environments, to leverage the strengths of the World Wide Web (while providing the Web with improved hypermedia services), and to integrate large classes of applications at once. Handling heterogeneity is addressed via a set of flexible abstract hypermedia concepts, application program interfaces in multiple programming languages, support for multiple operating systems, and a low entry barrier to use provided by an architecture designed to reduce the responsibilities of client applications. Integration with the Web is enabled via a scalable architecture for OHSs which is compatible with the Web's architecture and takes advantage of the strengths of the Web's protocols and the familiarity of Web interaction styles. The integration of multiple applications occurs via a technique for making user-interface toolkits (and hence their constructed applications) clients of an OHS.

The dissertation is validated by examining the characteristics of the clients integrated with the exploratory systems developed during the course of this research. The dissertation concludes by positioning this work within the context of large-scale information environments.

Professional Associations

Association of Computing Machinery
ACM SIGSOFT, SIGCHI, and SIGWEB

Professional Service

Journals

Information Director, ACM Transactions on Computer Human Interaction, 11/1997—1/2004

Professional Societies

Chair of the Committee for the 2019 ACM Athena Lecturer Award

Member of the Committee for the 2017 and 2018 ACM Athena Lecturer Award

Vice Chair (USA) of ACM SIGWEB, Fall 2003—Summer 2005

Program Committees

2019 Hypertext Infrastructures and Computation Track of ACM Hypertext and Social Media

2019 Innovations in Software Engineering Conference

2018 Innovations in Software Engineering Conference

2018 Big Data Analytics at the Euromicro Conference on SE and Advanced Applications

2018 ICWSM: International AAAI Conference on Weblogs and Social Media (senior PC member)

2017 ICWSM: International AAAI Conference on Weblogs and Social Media (senior PC member)

2017 Innovations in Software Engineering Conference

2017 Big Data Engineering Mini-Track at the Hawaii International Conference on System Sciences

2016 DATA: International Conference on Data Technologies and Applications

2015 ICWSM: Ninth International AAAI Conference on Weblogs and Social Media

2015 AAAI Symposium on Structured Data for Humanitarian Technologies

2015 DATA: International Conference on Data Technologies and Applications

2014 DATA: International Conference on Data Technologies and Applications

2014 Workshop on Collaborations in Emergency Response and Disaster Management

2013 DATA: International Conference on Data Technologies and Applications

2013 ICISOFT: 8th International Conference on Software and Data Technologies

2012 DATA: International Conference on Data Technologies and Applications

2012 ICISOFT: 7th International Conference on Software and Data Technologies

2011 ACM Conference on Hypertext

2011 ICISOFT: 6th International Conference on Software and Data Technologies

2010 ICISOFT: 5th International Conference on Software and Data Technologies

2010 ACM Conference on Hypertext

2010 WECU: 1st International Educators' Day on Web Engineering Curricula

2009 ACM Conference on Hypertext

2009 ICISOFT: 4th International Conference on Software and Data Technologies

2008 International Conference on Advanced Engineering Computing and Applications in Sciences

2008 IASTED International Conference on Internet and Multimedia Systems and Applications

2008 Web Engineering Track of the World Wide Web Conference

2008 ACM Conference on Hypertext

2007 International Conference on Advanced Engineering Computing and Applications in Sciences

2007 Web Engineering Track of the World Wide Web Conference

2007 ACM Conference on Hypertext

2006 ACM Conference on Hypertext

2006 Workshop on Web Maintenance and Reengineering

2006 Web Engineering Track of the World Wide Web Conference

2005 ACM Conference on Hypertext

2005 Web Engineering Track of the World Wide Web Conference (WWW 2005)

2004 International Conference on Software Engineering (ICSE 2004)

2004 International Symposium on the Foundations of Software Engineering (FSE 2004)

2004 ACM Conference on Hypertext; (**Associate Chair of Software Engineering Track**)

2004 Metainformatics Symposium (MIS 2004)

2002 ACM Conference on Hypertext

2001 ACM Conference on Hypertext

2001 World Conference on the WWW and Internet (WebNet01)
2001 International Workshop on Open Hypermedia Systems
2001 International Workshop on XML Technologies and Software Engineering
2000 World Wide Web Conference (WWW9)
2000 World Conference on the WWW and Internet (WebNet00)
2000 International Symposium on the Foundations of Software Engineering (FSE 2000)
2000 International Conference on Software Engineering (ICSE 2000)
1999 World Conference on the WWW and Internet (WebNet99)

Conference Committees

Mentor in the ICSE 2013 Mentoring Program
Social Media Co-Chair of the 2011 International Conference on Software Engineering
Co-Chair of the Software Testing Track of the 2011 Int'l Conf. on IT: New Generations
Proceedings Editor, 2006 International Conference on Software Engineering
Program Co-Chair, 2002 ACM Conference on Hypertext
Publicity Chair, 2002 International Conference on Software Engineering
Doctoral Consortium Chair, 2001 ACM Conference on Hypertext
Proceedings Chair, 2000 ACM Conf. on Hypertext and 2000 ACM Conference on Digital Libraries
Demos and Posters Co-Chair, 1998 ACM Conference on Hypertext
Demos and Posters Chair, 1998 ACM Conference on Digital Libraries

Reviewing

Journals

Journal of Contingencies and Crisis Management
International Journal of Geographical Information Science
IEEE Bulletin of the Technical Committee on Data Engineering
ACM Transactions on Computer Human Interaction
ACM Transactions on Software Engineering and Methodology
Automated Software Engineering
International Journal of Software Engineering and Knowledge Engineering
Journal of Web Engineering
Knowledge-Based Systems
The New Review of Hypertext and Hypermedia

Conferences

2017-2019 Innovations in Software Engineering Conference
2015, 2018 ICWSM: Ninth International AAAI Conference on Weblogs and Social Media
2015 AAAI Symposium on Structured Data for Humanitarian Technologies
2012-2016 DATA: International Conference on Data Technologies and Applications
2009-2013 ICSoft: International Conference on Software and Data Technologies
2008 IASTED International Conference on Internet and Multimedia Systems and Applications
2007–2008 International Conference on Advanced Engineering Computing and Applications in Sciences
2000, 2005–2008 World Wide Web Conference
2000, 2004 International Symposium on the Foundations of Software Engineering
1999-2001 World Conference on the WWW and Internet
1997-2002, 2004-2011 ACM Conference on Hypertext
1997, 2000, 2004 International Conference on Software Engineering
1997, 1998, 2013, 2017 ACM Conference on Human Factors in Computing Systems

Workshops

2014 Workshop on Collaborations in Emergency Response and Disaster Management
2001 International Workshop on XML Technologies and Software Engineering

2001 International Workshop on Open Hypermedia Systems
2000 International Workshop on Structural Computing

Honors and Awards

- 2018 Equity and Excellence Faculty Award from CU Boulder's Office of Diversity, Equity, and Community Engagement
- 2016-2017 Max S. Peters Faculty Service Award from CU Boulder's College of Engineering and Applied Science
- Member of CU Boulder's College of Engineering Faculty Leadership Advancement Group (FLAG); Spring 2012–Fall 2014
- Fellow of the Excellence in Leadership Program hosted by CU's University Leadership Development Institute for the 2011–2012 academic year
- Recipient of the Engelbart Best Paper Award at ACM Hypertext 2006

Academic Year	Department Service
2018-2019	Chair of Dan Szafir's Reappointment PUEC; Mentor to Dan Szafir and Ryan Layer
2017-2018	Mentor to Dan Szafir
2016-2017	Chair of Evan Chang's PUEC for Tenure; Mentor Dan Szafir
2015-2016	Spring 2016: No departmental service due to being Associate Dean Fall 2015: Executive Committee; Chair of the Search Committee
2014-2015	Chair of the Search Committee; Faculty Advisor for ACM Student Chapter
2013-2014	On Sabbatical; Faculty Advisor for ACM Student Chapter; Member of College's Faculty Leadership Advancement Group
2012-2013	Led implementation of the BA in CS degree program Associate Chair; Executive Committee; Undergraduate Committee (Chair) Staff Supervisor; Faculty Advisor for ACM Student Chapter Member of College's Faculty Leadership Advancement Group Member of Dean's Blue Ribbon Committee on Major Proposals (Summer 2012) Member of Dean's Blue Ribbon Committee on Staff Evaluation (Summer 2012)
2011-2012	Associate Chair; Executive Committee; Undergraduate Committee (Chair) Fellow of CU's Excellence in Leadership Program Member of College's Faculty Leadership Advancement Group Staff Supervisor; Faculty Advisor for ACM Student Chapter
2010-2011	Associate Chair; Executive Committee; Undergraduate Committee (Chair) Staff Supervisor; Faculty Advisor for ACM Student Chapter
2009-2010	Associate Chair (Spring 2010); Executive Committee (Spring 2010) Undergraduate Committee (Chair); Staff Supervisor (Spring 2010) ABET Committee; Faculty Advisor for ACM Student Chapter
2008-2009	Undergraduate Committee (Chair); ABET Committee Faculty Advisor for ACM Student Chapter
2007-2008	Executive Committee; Search Committee Chair of the Diversity Task Force; Faculty Advisor for ACM Student Chapter
2006-2007	Co-Chair of the Search Committee; Chair of the Diversity Task Force Faculty Advisor for ACM Student Chapter Site Director for ACM Regional Programming Contest
2005-2006	On Sabbatical
2004-2005	Grad Committee; Site Director for 2004 ACM Regional Programming Contest Faculty Advisor for ACM Student Chapter
2003-2004	CSEL Study Committee; Faculty Advisor for ACM Student Chapter
2002-2003	Executive Committee; Faculty Advisor for ACM Student Chapter
2001-2002	Executive Committee; Search Committee Site Director for 2001 ACM Regional Programming Contest
2000-2001	Search Committee and Graduate Student Recruiting Activities Site Director for 2000 ACM Regional Programming Contest
1999-2000	Search Committee; Judge for 1999 ACM Regional Programming Contest
1998-1999	Graduate Committee; Search Committee

