Andruid Kerne

andruid@ecologylab.net
http://ecologylab.net

EDUCATION

1995-2001 **New York University**, New York, New York
Ph.D. Computer Science
Dissertation title: "*CollageMachine*: A Model of 'Interface Ecology'".
Advisor: Academy Award winner Ken Perlin. Committee includes: director and TDR editor Richard Schechner, Guggenheim Fellowship winner Barbara Kirshenblatt-Gimblett.

1991-93 **Wesleyan University**, Middletown, Connecticut
M.A. Music, Composition
The Economic Survival Rite of Passage: a multimedia opera of musicians, actors, dancers & digitally sampled found sounds. Advisors: new music pioneers Alvin Lucier and Anthony Braxton (Macarthur Fellowship).

1977-82 **Harvard University**, Cambridge, Massachusetts
B.A. Applied Mathematics / Electronic Media
Created a new sub-concentration in Applied Mathematics. Advisor: Anthony Oettinger.

ACADEMIC POSITIONS

2008-	**Texas A&M University**, College Station, TX *Associate Professor, Computer Science and Engineering*
2013	**University of Nottingham**, Nottingham, United Kingdom *Sabbatical Fellow, Horizon Digital Economy Research Institute / Computer Science*
2002-08	**Texas A&M University**, College Station, TX *Assistant Professor, Computer Science*
2000-01	**Tufts University,** Medford, MA *Visiting Professor, Computer Science*
1997	**Parsons School of Design**, New York, NY *Lecturer, Interactive Art*

Research

GRANTS **$2,287,422**

External

2012-15	Kerne, A., Embodying Visual Semantic Information Composition to Stimulate Sensemaking and Ideation, National Science Foundation, $316,000.
2012-13	Kerne, A., Embodied Interactive Installation Ecologies, Horizon Digital Economy Research Institute at The University of Nottingham, $72,602.
2008-15	Kerne, A., CAREER: A Multimodal Mixed-Initiative Research Notebook for Information Discovery, National Science Foundation, Intelligent Information Systems: Human Centered Computing, $622,000.
2008-13	Kerne, A., Location-Aware Non-Mimetic Simulation Game for Teaching Team Coordination, National Science Foundation, Intelligent Information Systems: Human Centered Computing, $539,806
2012	Kerne, A., I-Corps: ZeroTouch: High-Performance Sensing for Multi-Touch and Free-Air Interaction, $50,000.

2012	Kerne, A., Kerne, A., Interface Ecology Lab, Meta-Metadata is S.IM.PL, Google Summer of Code, $40,500.
2011-12	Kerne, A., PSoC Ubiquitous Computing and Education: Arduino & 8051 Development Boards, Cypress Semiconductor, $44,988.
2011-12	Kerne, A., Interface Ecology Lab, Meta-metadata semantics, S.IM.PL: Support for Information Mapping in Programming Languages, Google Summer of Code, $23,801.
2012	Kerne, A., Scaling ZeroTouch, TEEX Disaster Preparedness and Response, $10,000.
2010	Kerne, A., U.S. Participation in ACM Multimedia Interactive Art Exhibition: An Interactive Renaissance of Color, National Science Foundation, $10,000.
2007-8	Kerne, A., Non-Mimetic Simulation of Fire Emergency Response Team Cognition Stress through a Mixed Reality Game, National Science Foundation, $96,893.
2006-9	Kerne, A., ALT: Promoting Information Discovery in Learning: Mixed-Initiative Composition of Hybrid Image-Text Surrogates, National Science Foundation, Advanced Learning Technologies, $266,940.
2004-5	Kerne, A., Smith, S.M., SGER: Extending Working Memory Functions by Presenting Bookmark and Result Sets as Temporal Visual Compositions, National Science Foundation, $84, 295.
Internal	
2005-7	Kerne, A., Gutierrez-Osuna, R., Song, D., Perceptive Sensor Networks Lab, Texas A&M College of Engineering, $80,000.
2006-7	Kerne, A., Visual Representations to Promote Creativity in The Design Process, Katrina-Rita Locative Media Dialogue, Texas A&M Arts Academy, $9,000.
2004-5	Kerne, A., Enhanced Generation of Navigational Information Compositions through Semantic Clustering, Texas A&M Humanities Informatics Initiative, $16,000
2004	Leggett, J., Shipman, F., Kerne, A., Computational Media Lab, Texas A&M CAF, $38,398.

PUBLICATIONS - JOURNAL

(*) indicates my student

1. Lupfer, N. (*), Linder, R. (*), Kerne, A., Qu, Y. (*), Chen., Y. (*), Webb, A. (*), Jain, A. (*), Beyond the Feed and the Board: Holistic Principles for Expressive Web Curation, in submission to *ACM Transactions on Computer-Human Interaction (ToCHI)*, 31 pages.
2. Kerne, A., Webb, A. (*), Smith, S.M., Linder, R. (*), Lupfer, N. (*), Qu, Y. (*), Moeller, J. (*), Damaraju, S. (*), Using Metrics of Curation to Evaluate Information-based Ideation, *ACM Transactions on Computer-Human Interaction (ToCHI)*, 21(3) June 2014, 48 pages.
3. Pipek, V., Liu, S., Kerne, A., Crisis Informatics and Collaboration: A Brief Introduction, *Journal of Computer Supported Cooperative Work (JCSCW)*, 23(4) July 2014, 339-345.
4. Toups, Z. O. (*), Hamilton, W. A. (*), Kerne, A. The Team Coordination Game: A zero-fidelity simulation abstracted from fire emergency response practice, *ACM Transactions on Computer-Human Interaction (ToCHI)*, 18 (4) Dec 2011, 37 pages.
5. Kerne, A., Koh, E. (*), Smith, S.M., Choi, H., Webb, A. (*), Dworaczyk, B. (*), combinFormation: Mixed-Initiative Composition of Image and Text Surrogates Promotes Information Discovery, *ACM Transactions on Information Systems*, 27 (1) Dec 2008, 5:1 - 5:45.
6. Kerne, A., Smith, S.M., Koh, E. (*), Graeber, R. (*), An Experimental Method for Measuring the Emergence of New Ideas in Information Discovery, *International Journal of Human Computer Interaction (IJHCI)*, 24 (5) July 2008, 460-477.

7. Kerne, A., Koh, E. (*), Representing Collections as Compositions to Support Distributed Creative Cognition and Situated Creative Learning, *New Review of Hypermedia and Multimedia (NRHM)* Special Issue on Studying the Users of Digital Education Technologies, 13(2) Dec 2007, 135-162.
8. Webb, A. (*), Kerne, A., Koh, E. (*), Human Movement and Clear Affordances Promote Social Interaction, *Leonardo Electronic Almanac (MIT Press)*, 19(5) May 2007.
9. Kerne, A., Doing Interface Ecology: The Practice of Metadisciplinarity, *Intelligent Agent*, 6(1) Jan. 2006, 1-6.
10. Kerne, A., Interface Ecology: An Open Conceptual Space of Collage and Emergence, *ArtLab23*, 1(1) Spring 2002, School of Visual Arts, NYC.
11. Kerne, A., The Conceptual Space of Collage, from CollageMachine to Interface Ecology and Back. *Cultronix*, 5, 2001, Carnegie Mellon University, Pittsburgh.
12. Kerne, A., CollageMachine: An Interactive Agent of Web Recombination, *Leonardo Journal of Arts and Sciences* (Juried Digital Salon Issue), 33(5) Nov 2000, 347-350.
13. Kerne, A., Cultural Representation in Interface Ecosystems Amendments to the interactions Design Awards Criteria. *ACM interactions*, 5(1) Jan 1998, 37-43.
14. Kerne, A. Lang, M., Kofi, F., Cultural Ecology from Ghana to the World Wide Web, *Leonardo Electronic Almanac (MIT Press)*, 4(3) March 1996.

PUBLICATIONS - CONFERENCE – FULL + ARCHIVAL

[acceptance rate %]

15. Jain, A. (*), Lupfer, N. (*), Qu, Y. (*), Linder, R. (*), Kerne, A., A Twitter Extension Stimulates Exploratory Browsing, *CHI 2015*, in submission.
16. Qu, Y. (*), Kerne, A., Lupfer, N. (*), Linder, R. (*), Jain, A. (*), Metadata Type System: Integrate Presentation, Data Models and Extraction to Enable Exploratory Browsing Interfaces, *Proc. ACM Engineering Interactive Computing Systems (EICS) 2014*, 107-116 [18%].
17. Linder, R. (*), Snodgrass, C. (*), and Kerne, A. Everyday Ideation: All of My Ideas Are On Pinterest, *Proc. CHI 2014*, 2411-2420 [23%].
18. Hamilton, W. (*), Garretson, O. (*), and Kerne, A. Streaming on Twitch: Fostering Participatory Communities of Play within Live Mixed Media, *Proc. CHI 2014*, 1315-1324 [23%].
19. Fischer, J., Jiang, W., Kerne, A., Greenhalgh,C., Ramchurn, S., Reece, S., Pantidi, N., Rodden, T., Supporting Team Coordination on the Ground: Requirements from a Mixed-Reality Game, *Proc Intl. Conf on Design of Cooperative Systems (Coop) 2014*, 49-67, Springer [42%].
20. Webb, A.M. (*), Linder, R. (*), Kerne, A., Lupfer, N. (*), Qu, Y. (*), Poffenberger, B. (*), and Revia, C., Promoting Reflection and Interpretation in Education: Curating Rich Bookmarks as Information Composition, *Proc. ACM Creativity and Cognition 2013*, 53-62 [32%].
21. Damaraju, S. (*). Seo, J.H., Hammond, T., Kerne, A., Multi-tap sliders: advancing touch interaction for parameter adjustment. *Proc ACM Intelligent User Interfaces (IUI) 2013*, 445-452 [22%].
22. Moeller, J. (*), Kerne, A., ZeroTouch: An Optical Multi-Touch and Free-Air Interaction Architecture, *Proc CHI 2012*, 2165-2174 [23%], **Best Paper Honorable Mention [top 5% of accepted papers]**.
23. Hamilton, W. A. (*), Kerne, A. , Robbins, T. (*), High-Performance Pen + Touch Modality Interactions: A Real-Time Strategy Game eSports Context, *Proc. ACM UIST 2012*, 309-318 [21%].
24. Kerne, A., Hamilton, W. (*), Toups, Z. O. Culturally Based Design: Embodying Trans-Surface Information Exchange in Rummy. *Proc CSCW 2012*, 509-518 [top 9%].
25. Toups, Z. (*), Kerne, A., Hamilton, W. (*), Shahzad, N. (*), Zero-Fidelity Simulation of Fire Emergency Response: Improving Team Coordination Learning, *Proc CHI 2011*, 1959-1968 [26%].

26. Webb, A. (*), Kerne, A., Integrating Implicit Structure Visualization with Authoring Promotes Ideation, *Proc JCDL 2011*, 203-212 [29%].
27. Kerne, A., Qu, Y. (*), Webb, A. (*), Damaraju, S. (*), Lupfer, N. (*), Mathur, A. (*), Meta-Metadata: A Metadata Semantics Language for Collection Representation Applications, *Proc ACM Conf. on Information and Knowledge Management (CIKM) 2010*, 1129-1138 [12.7%].
28. Toups, Z. O. (*), Kerne, A. (*), and Hamilton, W. 2009 (*). Game design principles for engaging cooperative play: core mechanics and interfaces for non-mimetic simulation of fire emergency response. *Proc SIGGRAPH Symposium on Video Games 2009*, 71-78 [30%].
29. Toups, Z. (*), Kerne, A., Hamilton, W. (*), Blevins, A. (*), Emergent Team Coordination: Non-Mimetic Simulation Game Design from Fire Emergency Response Practice, *Proc ACM Group 2009*, 341-350 [36%].
30. Koh, E. (*) and Kerne, A. 2009. Deriving image-text document surrogates to optimize cognition. *Proc ACM DocEng 2009*, 84-93 [29.6%].
31. Karlsen, K., Maiden, N., Kerne, A., Inventing Requirements with Creativity Support Tools, *Proc REFSQ 2009 (International Working Conference on Requirements Engineering: Foundation for Software Quality)*, 162-174 [29%].
32. Webb, A. (*), Kerne, A., The In-Context Slider: A Fluid Interface Component for Visualization and Adjustment of Values while Authoring, *Proc ACM AVI 2008 (Advanced Visual Interfaces)*, 91-99, [27.5%].
33. Toups, Z.O. (*), Kerne, A., Implicit Coordination in Firefighting Practice: Design Implications for Training Fire Emergency Responders, *Proc ACM CHI 2007*, 277-286 [25%].
34. Kerne, A., Koh, E. (*), Smith, S.M., Choi, H., Graeber, R. (*), Webb., A. (*), Promoting Emergence in Information Discovery by Representing Collections with Composition, *Proc ACM Creativity & Cognition 2007*, 117-126 [23%].
35. Koh, E. (*), Kerne, A., Webb, A.(*), Damaraju, S. (*), Sturdivant, D. (*), Generating Views of the Buzz: Browsing Popular Media and Authoring using Mixed-Initiative Composition, *Proc ACM Multimedia 2007*, 228-237 [19%].
36. Koh, E. (*), Caruso, D. (*), Kerne, A., Gutierrez-Osuna, R., Elimination of Junk Document Surrogate Candidates through Pattern Recognition, *Proc ACM Symposium on Document Engineering 2007*, 187-195 [39%].
37. Kerne, A., Koh, E. (*), Dworaczyk, B. (*), Mistrot, J.M. (*), Choi, H., Smith, S.M., Graeber, R. (*), Caruso, D. (*), Webb, A. (*), Hill, R., Albea, J., combinFormation: A Mixed-Initiative System for Representing Collections as Compositions of Image and Text Surrogates, *Proc Joint ACM/IEEE Digital Libraries 2006*, 11-20 [23%].
38. Webb, A. (*), Kerne, A., Koh, E. (*), Joshi, P. (*), Park, Y. (*), Graeber, R. (*), Choreographic Buttons: Promoting Social Interaction through Human Movement and Clear Affordances, *Proc ACM Multimedia 2006*, 451-460 [16%].
39. Koh, E. (*), Kerne, A., "I Keep Collecting": College Students Build and Utilize Collections in Spite of Breakdowns, *Proc European Conference on Digital Libraries 2006*, 303-314 [27%].
40. Kerne, A., Koh, E. (*), Choi, H., Dworaczyk, B. (*), Smith, S.M., Hill, R., Albea, J., Supporting Creative Learning Experience with Compositions of Image and Text Surrogates, *Proc Ed Media 2006*, 2567-2574 [29%].
41. Toups, Z.O. (*), Graeber, R. (*), Kerne, A., Tassinary, L., Berry, S. (*), Overby, K. (*), Johnson, M. (*), A Design for Using Physiological Signals to Affect Team Game Play, Proc Augmented Cognition International 2006 [70%].
42. Kerne, A., Koh, E. (*), Sundaram, V. (*), Mistrot, J.M. (*), Generative Semantic Clustering in Spatial Hypertext, *Proc ACM Document Engineering 2005*, 84-93 [30%].
43. Aley, E. (*), Cooper, T. (*), Graeber, R. (*), Kerne, A., Overby, K. (*), Toups, Z.O. (*), Censor chair: exploring censorship and social presence through psychophysiological sensing, *Proc. ACM Multimedia 2005,* 922-929 [16%].

44. Kerne, A., doing interface ecology: the practice of metadisciplinarity, *Proc SIGGRAPH 2005 Art and Animation,* 181-185 [20%].
45. Chang, M. (*), Leggett, J.L., Furuta, R., Kerne, A., Williams, J.P., Burns, S.L., Bias, R.G., Collection Understanding, *Proc ACM/IEEE Joint Conference on Digital Libraries 2004*, 334-342 [24%].
46. Kerne, A., Mistrot, J.M. (*), Khandelwal, M. (*), Sundaram, V. (*), Koh, E. (*), Using Composition to Re-Present Personal Collections of Hypersigns, *Proc Computational Semiotics in Games and New Media (CoSIGN) 2004*, 72-81 [17%].
47. Kerne, A. Smith S.M., Mistrot, J.M. (*), Sundaram, V. (*), Khandelwal, M. (*), Wang, J. (*), Mapping Interest and Design to Facilitate Creative Process During Mixed-Initiative Information Composition, *Proc Creativity & Cognition Symposium: Interaction: Systems, Practice and Theory*, 2004, 1-25.
48. Kerne, A., Sundaram, V. (*), A Recombinant Information Space, *Proc Computational Semiotics in Games and New Media (CoSIGN) 2003*, 48-57 [25%].
49. Kerne, A., "Concept-Context-Design: A Creative Model for the Development of Interactivity," *Proc ACM Creativity and Cognition 2002*, 192-199 [48%].
50. Kerne, A., Interface Ecosystem, the Fundamental Unit of Information Age Ecology," *Proc SIGGRAPH 2002 Art and Animation*, 142-145 [19%].
51. Karadkar, U.P., Kerne, A., Furuta, R., Francisco-Revilla, L., Shipman, F., Wang, J. (*), Connecting Interface Metaphors to Support Creation of Hypermedia Collections, *Proc European Conf Digital Libraries 2003*, 338-349 [29%].

PUBLICATIONS - BOOK

52. Smith, S.M., Kerne, A., Koh, E. (*), Shah, J., The Development and Evaluation of Tools for Creativity, in Markman, A., *Tools for Innovation*, Oxford University Press, 2009.
53. Kerne, A., Koh, E. (*), Choi, H., Webb, A. (*), Dworaczyk, B. (*), Smith, S.M., Hill, R., Albea, J., Supporting Creative Learning Experiences: combinFormation and the Future of Knowledge Creation, in Coste, T., Keller-Mathers, S. (Eds.), *Creativity at Work*, Austin, TX: ACA Press, 2007.

PUBLICATIONS - CONFERENCE – SHORT + ARCHIVED

54. Fei, S., Webb, A.M., Kerne, A., Qu, Y., Jain, A., Peripheral Array of Tangible NFC Tags: Positioning Portals for Embodied Trans-Surface Interaction, *Proc. ACM Interactive Tabletops and Surfaces 2013*, 33-36 [29%].
55. Kerne, A., Webb, A.M. (*), Latulipe, C., Carroll, E., Drucker, S.M., Candy, L., Höök, Evaluation methods for creativity support environments, *Proc CHI 2013 Extended Abstracts*, 3295-3298 [38%].
56. Hamilton, W., Kerne, A., Moeller, J., Pen-in-Hand Command: NUI for a Real-Time Strategy Game, *Extended Abstracts of SIGCHI 2012 (Video).*
57. Damaraju, S. (*), Kerne, A., Comparing Multi-Touch Interaction Techniques for Manipulation of an Abstract Parameter Space, *Proc. ACM Multimodal Interfaces (ICMI) 2011*, 221-224 [39%].
58. Qu, Y. (*), Kerne, A., Webb, A.M. (*), Herstein, A. (*), Interoperable Metadata Semantics with Meta-Metadata: A Use Case Integrating Search Engines, *Proc ACM DocEng 2011*, 171-174 [53%].
59. Moeller, J. (*), Kerne, A., ZeroTouch: A Zero-Thickness Optical Multi-Touch Force Field, *Proc CHI 2011 Extended (Interactivity)*, 1165-1170 [46%].
60. Moeller, J. (*), Lupfer, N. (*), Hamilton, W. (*), Lin, H. (*), Kerne, A., intangibleCanvas: Free-Air Finger Painting on a Projected Canvas, *Proc CHI 2011 Extended*, 1615-1620 [43%].
61. Kerne, A., Nack, F., Farulli, L., Interactive Multimedia Computing for Creativity and Expression, *Proc ACM Multimedia 2010*, 1457-1458.

62. Moeller, J. (*)., Kerne, A., Scanning FTIR: Unobtrusive Multi-Touch Sensing through Waveguide Transmissivity Imaging, *Proc ACM Tangible, Embedded, and Embodied Interaction (TEI) 2010*, 73-76 [34%].
63. Koh, E. (*), Kerne, A. Test Collection Management and Labeling System. *Proc ACM DocEng 2009*, 39-42 [29.6%].
64. Hamilton, W. (*), Kerne, A., Toups, Z. (*), Qualitative Data Discovery in Group User Studies from Synchronized Communication and Views, *Extended Abstracts of ACM CHI 2009*, 4573-4578.
65. Koh, E. (*), Kerne, A., Moeller, J., Toward Automatic Generation of Image-Text Document Surrogates To Optimize Cognition. *Proc JCDL 2009*, 417-418.
66. Kerne, A., Wakkary, R., Nack, F., del Bimbo, A., Candan, S., Jaimes, A., Steggell, A., Dulic, A., Jennings, P., Connecting Artists and Scientists in Multimedia Research, *Proc ACM Multimedia 2008*, 1113-1114.
67. Kerne, A., Toups, Z. (*), Dworaczyk, B. (*), Khandelwal, M. (*), A Concise XML Binding Framework Facilitates Practical Object-Oriented Document Engineering, *Proc ACM Document Engineering 2008*, 62-65 [43%].
68. Koh, E. (*), Kerne, A., Hill, R., Creativity Support: Information Discovery and Exploratory Search, *Proc ACM SIGIR 2007*, 895-896.
69. Kerne, A., Koh, E. (*), Creativity Support: The Mixed-Initiative Composition Space, *Proc ACM/IEEE JCDL 2007*, 509.
70. Graeber, R. (*), Kerne, A., ZooMICSS: A Zoomable Map Image Collection Sensemaking System (The Katrina Rita Context), *Proc ACM Multimedia 2006*, 795-796 [37%].
71. Stenner, J. (*), Kerne, A., Williams, Y., Playas: Homeland Mirage, *Proc. ACM Multimedia 2005*, 1057-1058 [28%].
72. Kerne, A., Smith, , S.M., Choi, H., Graeber, R. (*), Caruso, D. (*), Evaluating Navigational Surrogate Formats with Divergent Browsing Tasks, *Proc CHI 2005 Extended*, 1537-1540.
73. Mandic, M. (*), Kerne, A., Using Intimacy, Chronology and Zooming to Visualize Rhythms in Email Experience, *Proc CHI 2005 Extended*, 1617-1620.
74. Kerne, A., Smith, S.M., The Information Discovery Framework, *Proc ACM Designing Interactive Systems 2004*, 357-360 [25%].
75. Khandelwal, M. (*), Kerne, A., Mistrot, J.M. (*), Manipulating History in Generative Hypermedia, *Proc ACM Hypertext 2004*, 139-140 [31%].
76. Azeez, B. (*), Kerne, A., Southern, J. (*), Summerfield, B. (*), Aholu, I. (*), Sharmin, E. (*), Sharing Culture Shock through a Collection of Experiences, *Proc ACM/IEEE Joint Conference on Digital Libraries 2004*, [24%].
77. Kerne, A., Sundaram, V. (*), Wang, J. (*), Khandelwal, M. (*), Mistrot, J.M. (*), Human + Agent: Creating Recombinant Information, *Proc ACM Multimedia 2003*, 454-455 [17%].
78. Kerne, A., CollageMachine: Interest-Driven Browsing Through Streaming Collage," *Proc Cast01, Living in Mixed Reality* (Bonn), 2001, 241-244 [7%].
79. Kerne, A., Khandelwal, M. (*), Sundaram, V. (*), Publishing Evolving Metadocuments on the Web, *Proc ACM Hypertext 2003*, 104-105 [33%].
80. Kerne, A., Jeremijenko, N., Mateas, M., Schiphorst, T., Wright, W. Extending Interface Practice: An Ecosystems Approach, *Proc SIGGRAPH 2002: Abstracts & Applications*, 90-92 [19%].
81. Kerne, A., Open Processes Create Open Products: Interface Ecology As A Metadisciplinary Base For CollageMachine, P*roc SIGGRAPH01: Abstracts and Applications*, p. 239 [22%].
82. Kerne, A. Interface Ecology as a Pedagogical Framework for HCI, *Proc HCI97/INTERACT*, Nov 1997 [33%].
83. Kerne, A. CollageMachine: Temporality and Indeterminacy in Media Browsing via Interface Ecology, *Proc*

ACM CHI 1997 Extended, 238-239 [24%].

PUBLICATIONS - CONFERENCE

84. Toups, Z., Hamilton, W. (*), Kerne, A., Zero-fidelity simulation: Engaging team coordination without physical, functional, or psychological re-creation, *Proc ModSim World 2011*, 451–459.
85. Smith, S. M., Linsey, J., Kerne, A. Using evolved analogies to overcome creative design fixation. *Proc International Conference on Design Creativity (ICDC) 2010*, 35-40 [33%].
86. Kerne, A., Damaraju, S.(*), Kumar, B.(*), and Webb, A.(*), Meta-Metadata: A Semantic Architecture for Multimedia Metadata Definition, Extraction and Presentation, *Poster & Demo Proc. Intl. Conf Semantic and Digital Media Technologies 2008*.
87. Damaraju, S. (*), Kerne, A. Multitouch Gesture Learning and Recognition System, *Extended Abstracts of IEEE Workshop on Tabletops and Interactive Surfaces 2008*.
88. Toups, Z. (*), Kerne, A., Caruso, D. (*), Devoy, E. (*), Graeber, R. (*), Overby, K. (*), Rogue Signals: A location aware game for studying the social effects of information bottlenecks, *Proc Ubicomp 2005 Extended.*
89. Mandic, M. (*), Kerne, A., faMailiar - Intimacy-based Email Visualization, *Proc IEEE InfoVis (Information Visualization) 2004* [23%].
90. Kerne, A., Object Oriented Multimedia Programming in Java, *Proc ICS Intranet 1996*.

PAPERS - WORKSHOP

91. Webb, A.M. (*), and Kerne, A., Embodying Diagramming through Pen + Touch Gestures, *CHI 2014 Gesture Interaction Design: Communication and Cognition Workshop.*
92. Webb, A.M., Kerne, A., Linder, R., Lupfer, N., Qu, Y., Keith, K., Carrasco, M., Multi-Scale Information Composition: a New Medium for Freeform Art Curation in the Cloud, *CHI 2014 Workshop: Curating the Digital: Spaces for Art and Interaction.*
93. Linder, R. (*), Webb, A.M. (*), and Kerne, A., Searching to Measure the Novelty of Collected Ideas, *CHI 2013 Evaluation Methods for Creativity Support Environments Workshop* [36%].
94. Webb, A. (*), Kerne, A., Creative Visual Thinking through Information Composition +Diagramming, *CHI 2012 Workshop: Visual Thinking.*
95. Linder, R. (*), Kerne, A., Using Information Composition to Represent Connections Among Events Across Time and Place, *CHI 2012 Workshop: Heritage Matters: Designing for Current and Future Values Through Digital and Social Technologies.*
96. Toups, Z., Hamilton, W. (*), Kerne, A., Mixed Reality Affords Zero-Fidelity Simulation of Team Coordination, *CSCW 2012 Mixed Reality Games Workshop.*
97. Toups, Z. (*), Kerne, A., Hamilton, W. (*), Motivating Play through Score, *Proc. ACM CHI 2009 Engagement by Design.*
98. Toups, Z. (*), Kerne, A., Crafting Experience in a Non-Mimetic Simulation Game for Team Coordination: An Iterative Design Chronicle, NSF Workshop on Media, Arts, Sciences, and Technology 2009.
99. Webb, A. (*), Kerne, A., In-Context Visualization and Authoring of Metadata for Information Collections, NSF Workshop on Media, Arts, Sciences, and Technology 2009.
100. Damaraju, S. (*), Kerne, A., A Gesture Learning and Recognition System for Multitouch Interaction Design, NSF Workshop on Media, Arts, Sciences, and Technology 2009.
101. Koh, E. (*), Kerne, A., combinFormation: Exploring Multiple Searches Together through the Mixed-Initiative Composition Space, *Proc ACM Computer Human Interaction 2007 Workshop on Exploratory Search and HCI*, San Jose, April 2007 [24%].

102.Toups, Z.O. (*), Kerne, A., Location-Aware Augmented Reality Gaming for Emergency Response Education: Concepts and Development, *Proc ACM Computer Human Interaction 2007 Workshop on Mobile Spatial Interaction*.

103.Kerne, A., Compositional Hypermedia, ACM Hypertext 2004, *Spatial Hypertext Workshop*.

104.Kerne, A., combinFormation: Generative Visual Visceral Spatial Hypertext Collections, Shipman, F., Rosenberg, J., ACM Hypertext 2003, *Spatial Hypertext Workshop*.

105.Schiphorst, T., Kerne, A., Kozel, S., Whisper: Wearable Handheld Intimate System for Personal Environmental Response, ACM CHI 2002, *Physiological Computing Workshop*.

106.Kerne, A., The Interface Ecology Research Agenda for HCI, ACM CHI 1999, *Development of an HCI Research Agenda Workshop*.

107.Kerne, A., Emergent Collage Browsing, Interactive Systems for Supporting the Emergence of Concepts & Ideas, ACM CHI 1997 Emergence Workshop.

PUBLICATIONS – OTHER

108.Kerne, A. Lang, M., Djembe Drumming, *Program for the World Music Institute African Troubadours Festival*, 1995.

PRIZES AND AWARDS

2012	ACM CHI 2012, Best Paper Honorable Mention (top 5% of accepted papers), for ZeroTouch: An Optical Multi-Touch and Free-Air Interaction Architecture.
2000 - 2001	NYU History of the Production of Knowledge Dissertation Fellowship.
1999	Milia 2000 new media talent competition, Cannes, France: *CollageMachine*.
1996	Prix Ars Electronica, Linz, Austria – honorary mention: *Coded Messages: CHAINS*
1995 - 2000	National Science Foundation Fellowship for Ph.D. research in multimedia at NYU
1991 - 1993	Full tuition scholarship + stipend for M.A. in music at Wesleyan University

PRESS

Lesley Henton, Some College Students Aren't Waiting Until Graduation to Start a Business, Texas Monthly, 2/11/2013, http://www.texasmonthly.com/story/sponsor-content-start-a-business-before-graduation.

Slashdot, ZeroTouch Sensor: Ready For Large Televisions and Gaming, 5/15/2012.

New Media Consortium, Horizon Project Short List 2012 Higher Education Edition, http://horizon.wiki.nmc.org/file/view/2012-Horizon.HE-Shortlist.pdf.

ZeroTouch invention, graduate student Jon Moeller, and Texas A&M University were featured in the national BestBuy Future Innovators advertising campaign [http://vimeo.com/62286063]. The ad was featured amidst prominent TV shows, such as Mad Men, 60 Minutes, and the NBA Finals. The provost told me, "You can't buy promotion like that!" Summer/Fall 2012.

Amber Jaura, Futuristic touch: ZeroTouch technology offers surface-free sensing, *The Batt*, 4/19/2012.

Shane McAuliffe, A&M Students Create ZeroTouch Technology, *KBTX TV*, 1/30/2012.

Tony Okonski, ZeroTouch: A New Multifinger Sensing Technology, *Texas A&M Engineer*, Fall 2011, COVER STORY.

Graeme McMillan, ZeroTouch Lets You Paint Pictures in the Air, *Time*, 5/11/2011, http://techland.time.com/2011/05/11/zerotouch-lets-you-paint-pictures-in-the-air/.

Alyssa Danigelis, Technology turns air into a multi-touch screen, *MSNBC*, 5/13/2011, http://www.msnbc.msn.com/id/43028337/ns/technology_and_science-science/#.T2sr6WJAawk.

Alyssa Danigelis, Technology turns air into a multi-touch screen, *Discovery News*, 5/13/2011, http://news.discovery.com/tech/touch-screen-technology-zerotouch-110513.html.

Clay Dillow, New ZeroTouch Interface is a Touchscreen Without the Screen, *PopSci*, 5/12/2011, http://www.popsci.com/technology/article/2011-05/video-new-zerotouch-interface-touchscreen-without-screen.

Nick Barber, Invisible Touch Interface Creates Multitouch 'Force Field', PCWorld, 5/10/2011, http://www.pcworld.com/article/227509/invisible_touch_interface_creates_multitouch_force_field.html.

Jim Giles, ZeroTouch makes any screen touchable, NewScientist, 5/11/2011, http://www.newscientist.com/blogs/onepercent/2011/05/jim-gile-contributor-vancouver.html.

angry tapir, Creating a "Force Field" Invisible Touch Interface, Slashdot, 5/10/2011, http://hardware.slashdot.org/story/11/05/11/009245/Creating-a-Force-Field-Invisible-Touch-Interface.

Christopher Trout, ZeroTouch 'optical multi-touch force field' makes a touchscreen out of just about anything, *Engadget*, 5/12/2011, http://www.engadget.com/2011/05/12/zerotouch-optical-multi-touch-force-field-makes-a-touchscreen/.

Kat Hannaford, The Touchscreen With No Screen, *Gizmodo*, 5/12/2011, http://gizmodo.com/5801196/the-touchscreen-with-no-screen.

Nicole, With this system, any screen can be a touchscreen, *InRumor.com*, 5/13/2011, http://www.inrumor.com/in/technology/with-this-system-any-screen-can-be-a-touchscreen-video/.

Des collages virtuels, logiques ou surréalistes, et qui doivent rester éphémères, *Le Monde*, 3/2/2000.

PRESENTATIONS

July 2014	Microsoft Research, Redmond, Washington. *Embodying Ideation + Play.*
November 2012	Distinguished Lecture. Mixed Reality Lab, Department of Computer Science, University of Nottingham, UK. *Embodied Computing: Sensing + Games + Information.*
August 2012	School of Computing, Georgia Tech, Atlanta. *Embodied Interaction: Sensing + Games + Information.*
June 2012	Department of Computer Science, University of Houston. *Human-Centered Computing for Creativity, Expression, and Participation.*
February 2012	Department of Computer Science and Engineering, University of Washington, Seattle. *Human-Centered Computing for Creativity, Expression, and Participation.*
February 2012	Department of Computer Science and Engineering + School of Library and Information Sciences, University of North Texas, Denton. *Human-Centered Computing for Creativity, Expression, and Participation.*
December 2011	MIT Media Lab, Cambridge, Massachusetts. *Human-Centered Computing for Creativity, Expression, and Participation.*
November 2011	Yahoo! Research, Barcelona, Spain. *Human-Centered Computing for Creativity, Expression, and Participation.*
November 2011	Universitat Pompeu Fabra, Barcelona, Spain. *Human-Centered Computing for Creativity, Expression, and Participation.*
October 2011	Stanford University, Palo Alto, California. *Human-Centered Computing for Creativity, Expression, and Participation.*
Aug 2010	University of Colorado, Boulder *Computing for Creativity and Cooperation.*
March 2010	Rutgers University, New York *Computing for Creativity and Cooperation.*
March 2010	Columbia University, New York *Computing for Creativity and Cooperation.*
March 2010	NYU Media Research Lab, New York *Computing for Creativity and Cooperation.*
November 2008	Electronic Arts, Vancouver, Canada *Iterative Design of a Creativity Support Tool: combinFormation.*
June 2008	ACM Multimedia Program Committee Workshop: Hot Topics in Multimedia Research, Technische Universität Darmstadt - Multimedia Communications Lab , Germany *A Mixed-Initiative Information Composition Platform for Supporting Discovery*
June 2008	University of Amsterdam, The Netherlands *Creative and Expressive Systems.*
June 2008	Dagstuhl Seminar on Contextual and Social Media, Germany *A Mixed-Initiatives Philosophy for Human Centered Contextual Media Systems*
June 2008	University of Florence, Italy *Creative and Expressive Systems.*

April 2008	University of Illinois Urbana-Champaign (UIUC) *Creative and Expressive Systems*.
March 2007	Invited Conference Plenary Address: Intersection: A Conversation Between Art and Science on Information Visualization SUNY Oswego, New York, *Creative and Expressive Systems*.
March 2007	University of Maryland Human Computer Interaction Lab *Creative and Expressive Systems*.
March 2007	NYU Media Research Lab, New York *Creative and Expressive Systems*.
December 2006	NSF PIs Meeting: Research and Evaluation on Education in Science and Engineering, *Facilitating Information Discovery in Invention Education: Collecting Prior Work through Mixed-Initiative Composition of Image and Text Surrogates* (poster).
August 2006	IBM Almaden Research Center, *A Mixed-Initiative System for Representing Collections as Compositions of Image and Text Surrogates*
May 2005	University of Ljubljana, Slovenia, *combinFormation: Mixed-Initiative Composition of Image and Text Surrogates*
September 2004	IBM Research Labs, Austin, Texas, *Expressive and Personal Interface Ecosystems*
March 2004	Texas A&M Cognoscenti (Cognitive Psychology Colloquium), *Information as a Stimulus for the Discovery of Remote Associations*
April 2002	SUNY (Oswego), USA, *Emergent Collage Browsing*
April 2002	University of Waikato, New Zealand, *Emergent Collage Browsing*
March 2002	Interactive Institute, Stockholm, Piteau, Sweden, *Conceptual Space of Collage*
October 2001	Simon Fraser University (Surrey Campus), Canada, *Emergent Collage Browsing*
August 2001	Banff Centre New Media Institute (senior artist) Unforgiving Memory and Human Generosity summits: *Representations of Relation, Emergent Collage Browsing*
August 2001	SIGGRAPH, Los Angeles: *Streaming Representations / Emerging Meanings* in the "Moving Images" Panel. *Dynamic Collage Layout* in The Studio.
January 2001	Xerox PARC, Palo Alto, California, *CollageMachine*
December 2000	ISEA 2000, Paris, France: *CollageMachine*
April 1997	Performance and Technology Conference (performance studies), Atlanta: • *Ecologies of the Interface* • *Providing Content: Ecologies of Creativity and Efficiency* Panel
1996	Inroads/Africa Conference, Arts International, *Digital Representation: Access to Communications Technology*, Panel Facilitator
1994	Pan-African Composers Forum. International Centre for African Music and Dance, University of Ghana: *Screaming with Machines: Dead Animals, Live Circuits, Human Voice*

Service

EDITOR

2014	Pipek, V., Liu, S., Kerne, A., Editors, *JCSCW*, Special Issue on Crisis Informatics and Collaboration. 23(4), August 2014.

CHAIR

2015	Kerne, A., Papers Chair, *ACM Conference on Creativity and Cognition 2015*, Glasgow, Scotland.
2015	England, D., Candy, L., Latulipe, C., Schiphorst, T., Edmonds, E., Kim, S., Clark, S., Kerne, A., Workshop *Art.CHI*, ACM CHI 2015, Seoul, S. Korea.
2013	Kerne, A., Webb, A.M. (*), Latulipe, C., Carroll, E., Drucker, S.M., Candy, L., Höök, Workshop: *Evaluation Methods for Creativity Support Tools*, ACM CHI 2013, Paris, http://ecologylab.net/workshops/creativity.
2012	Workshop Co-Chair, Kerne, A., Latulipe, C., Carroll, E., Webb., A. (*), *Evaluation Methods for Creativity Support Tools*, Design Computing and Cognition 2012, College Station, TX.
2010	Kerne, A., Toups, Z. (*), Elam, T., *Texas Games and Virtual Environments Symposium 2010*, College Station, TX.
2010	Workshop Co-Chair, Kerne, A., Nack, F. *Interactive Multimedia Computing for Creativity and Expression*, ACM Multimedia 2010, Florence, Italy.
2010	Program Co-Chair, *ACM Multimedia Interactive Art Program*, Florence, Italy.
2009	Program Co-Chair, *ACM Multimedia Interactive Art Program*, Beijing, China.
2008	Program Co-Chair, *ACM Multimedia Interactive Art Program*, Vancouver, British Columbia, Canada.
2004	Workshop Chair, *Recombinant Information*, Conference on Computational Semiotics in Games and New Media (CoSIGN)

PROGRAM COMMITTEE / AWARD PANEL

ACM CHI Associate Chair	2013 2012 2011 2009 2007
NSF Grant Award Panel	2013 2012 2011 2010 2009 2009 2008 2007 2005 2005 2004
ACM Interactive Tabletops and Surfaces PC	2012
ACM TEI PC	2012 2011
ACM/IEEE JCDL PC	2012 2011 2010 2009 2008
ACM Creativity & Cognition PC	2011 2009 2007
ACM Multimedia TPC	2012 2011 2008 2007
Sketch-Based Interfaces and Modeling (SBIM) PC	2011
ACM DocEng PC	2010 2009
ACM IUI PC	2010
Intl. WWW Conference PC	2009
NSF Media, Arts, Sciences & Tech Workshop PC	2009
ACM Intl. Multimedia Modeling PC	2009 2008
ACM SIGGRAPH Sketches and Posters PC	2007

REVIEWING

Natural Sciences and Engineering Research Council of Canada (NSERC)	2015
ACM UIST	2014 2012 2011 2007 2002
ACM Computing Surveys	2012
ACM Transactions on Computer Human Interaction	2011
J Visual Com & Image Rep	2010
ACM Tabletop	2010
IEEE Transactions on Multimedia	2008
ACM Transactions on the Web	2008
New Review of Hypermedia and Multimedia	2008 2009
Applied Ontology Journal	2008
ACM CHI	2008 2006 2005 2004
IEEE Computing	2007
ACM Multimedia	2006 2005 2004
ACM CSCW	2006
ACM SIGGRAPH, Art Gallery	2006
International Journal of Digital Libraries	2005
ACM DIS	2004
Computational Semiotics in Games and New Media	2004

CREATIVITY SUPPORT ENVIRONMENT [INFORMATION COMPOSITION] USE IN COURSES ON ASSIGNMENTS – PROVIDE PEDAGOGY & SUPPORT

Year	*Semester*	*University*	*Course #*	*Course Name*	*Professor*	*Creativity Support Environment*	*partic-ipants*	*total students*
9.5	**Years**			**Total**			**3517**	**5518**
2014	fall	Texas A&M	COMM 452	Cultural Studies of Communication Technology	Cara Wallis	IdeaMÂCHÉ	22	22
2014	fall	Texas A&M	CSCE 667	Adv. Seminar in Human-Centered Computing & Info	Andruid Kerne	IdeaMÂCHÉ	15	15
2014	fall	Texas A&M	ARCH 329	Landscape Construction I	Jun-Hyun Kim	Body-based IdeaMÂCHÉ	4	28
2014	fall	Texas A&M	ENDS 101	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	IdeaMÂCHÉ	340	370
2014	spring	Prairie View A&M	COMM 1003	Fundamentals of Speech	Toneisha Taylor	IdeaMÂCHÉ	6	20
2014	fall	Texas A&M	CSCE 655	Human-Centered Computing	Andruid Kerne	IdeaMÂCHÉ	21	21
2014	spring	Texas A&M	LAND 321	Landscape Design IV	Jun-Hyun Kim	Body-based IdeaMÂCHÉ	6	20
2014	spring	Texas A&M	ENDS 101	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	IdeaMÂCHÉ	294	366
2013	fall	Texas A&M	ENDS 102	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	IdeaMÂCHÉ	335	404
2013	spring	Texas A&M	ARCH 689	Visual Thinking: Theories and Methods of Diagramming	Weiling He	Body-based IdeaMÂCHÉ	11	15
2013	spring	Texas A&M	ENDS 103	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	IdeaMÂCHÉ	201	245
2012	fall	Texas A&M	ENDS 104	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	InfoComposer	161	225
2012	spring	Texas A&M	ENDS 105	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	InfoComposer	189	220
2011	fall	Texas A&M	ENDS 106	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	InfoComposer	151	253
2011	spring	Texas A&M	ENDS 107	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	145	252
2010	fall	Texas A&M	ENDS 108	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	129	219
2010	spring	Texas A&M	ENDS 109	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	27	201
2009	fall	Texas A&M	ENDS 110	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	77	235
2009	spring	Texas A&M	ENDS 111	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	145	238
2009	spring	Texas A&M	ENDS 112	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	92	168
2008	fall	Texas A&M	ENDS 113	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	157	246
2008	fall	Texas A&M	ENDS 114	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	104	180

2008	spring	Texas A&M	ENDS 115	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	120	229
2008	spring	Texas A&M	ENDS 116	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	90	142
2007	fall	Texas A&M	ENDS 117	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	91	144
2007	fall	Texas A&M	ENDS 118	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	130	202
2007	spring	Texas A&M	ENDS 119	The Design Process: Creativity & Entrepreneurship	Jorge Vanegas	combinFormation	89	168
2007	spring	Texas A&M	ENDS 120	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	79	154
2006	fall	Texas A&M	ENDS 121	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	100	165
2006	spring	Texas A&M	ENDS 122	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	89	169
2005	fall	Texas A&M	ENDS 123	The Design Process: Creativity & Entrepreneurship	Rodney Hill	combinFormation	98	182

DEPT. COMMITTEES

Graduate Advisory Committee	2013-14
Colloquium Committee	2014-15 2013-14 2010-11 (chair) 2009-10 (chair) 2008-09 (chair) 2002-03
Undergraduate Curriculum Committee	2011-12
Joint Computer Science / Visualization Committee	2010-11 2009-10
Visualization Dept. Search Committee: Games and Interactive Media	2010-11
Web Advisory Committee	2010-11 (chair) 2008-09 2004-05 (chair) 2003-04
Undergraduate Recruiting Committee	2009-10 (chair) 2008-09
Computing Infrastructure Committee	2006-07
Library Committee	2002-03

Teaching

2008 -	Associate Professor
2002 - 2008	Assistant Professor Interface Ecology Lab | Center for Study of Digital Libraries Department of Computer Science Texas A&M University. College Station, TX

- Supervise research for 3 completed Ph.D.s, 8 completed M.S. students with thesis, 19 total REUs. Currently supervising 6 Ph.D.s + 1 M.S. thesis + 5 REUs.
- Develop new courses. Carry a 1 + 2 teaching load.
- Please check out course website: **`http://ecologylab.net/courses`**

CSCE 315 Programming Studio [2014][112 students]
This demi-capstone course is a project-based programming intensive. The curriculum addresses software design and engineering, databases, practical human-computer interaction methods, web programming, and mobile computing. The primary goals for this class are to foster students' emergence with strong programming skills and abilities to work in teams.

CSCE 482 Senior Capstone Design in Computer Science [Fall 2011, Fall 2010, Spring 2010]
I designed this intensive, the ultimate course in our undergraduate computer science education. I engage students in research-level projects, involving areas such as multi-surface interaction, games, and information. The students begin by writing an NSF-style proposal introduction, with a research plan, as a bid for a topic and a set of resources, such as iPhones and/or an iPad. They develop software, take IRB training, run user studies, produce a polished video, and write a research paper. They learn about how to articulate intellectual merit and broad impact.

Educational Outcomes Assessed by Industry Panel: Fall 2011 (1-5)

Ability to apply knowledge of mathematics, science, and computing	4.5
Ability to design and conduct experiments and to analyze and interpret data	4.2
Ability to design a system, component, or process to meet desired needs	4.2
Ability to function on a multi-disciplinary teams	4.5
Ability to identify, formulate and solve computer-related problems	4.7
Understanding of professional and ethical responsibility	3
Ability to communicate effectively – both orally and in writing	4.7
Ability to use the techniques, skills, and modern computing tools necessary for computer science practice	4.8

CSCE 655 Human-Centered Computing [2014, 2011, 2010, 2009, 2008, 2007, 2006, 2005, 2004]
I developed a new introductory graduate core methods course. I took initiative, first by suggesting the need for an introductory HCC methods prerequisite, then by developing consensus on its curriculum. Our consensus synthesizes iterative design and evaluation methods, graphical and social interaction, graphics and animation, visual principles, game design, object oriented software engineering, and topics in information and media semantics research. I developed specific readings and assignments. In the first half, students engage in individual programming, design, and user study projects. In the 9-week final project sequence, students work in teams, providing the opportunity to develop a project through an intensive real world design cycle. Stages include two iterations of a proposal, an ethnography, storyboards and lightweight prototypes, 2 cycles of user evaluation, a functional prototype, and a conference style research paper. Some projects carry over into ongoing research. Final projects involve interactive games, curation, artistic installation, or information visualization.

CSCE 667 Advanced Seminar in Human-Centered Computing and Information
I worked with affiliated faculty to develop a new advanced seminar course offering umbrella. Courses offered under this umbrella combine readings of important research papers with intensive projects. It can be taught with any conceptual focus as long as it addresses state-of-the-art research topics. Students can repeat it for credit.

My incarnations adopt a studio / laboratory format. The courses emphasize participation and collaboration.

Curation and Ideation Meet Social Media [Fall 2014]
Curation, the process of caring for, assembling, and exhibiting objects, grows into an extremely popular Internet activity. Ideation, the process of generating and developing new ideas, takes form through curation, on scales from personal to social to societal.

This course contextualizes investigation of contemporary curation and ideation practices in and around social media with relevant art practices, and empirical theories of creative cognition and graphical presentation. We will invoke framings such as Duchamp's found objects, assemblage, social capital, and information visualization. We'll examine the role of social media in the ideation processes that impact emergent political movements, including Ferguson and Arab Spring, and other societal events.

Students across disciplines are encouraged to take this course. Each student will focus on strengths from their background, such as arts, humanities, social sciences, computer science, or engineering.

Our mission: to understand how curation serves human needs for engagement in ideation, considering social media's involvement. We will imagine and investigate new future personal and social forms of curation and ideation, and roles for people and computing. Projects will involve curation, design, systems, information visualization, studies, and writing. **#curation#ideation**

Students went beyond my hopes in incorporating information composition of rich clippings into this course's discourse. They adopted the cloud-based IdeaMÂCHÉ for presentations on readings and research. The non-linear format provoked discussion and associational ideation across readings and fields. The students developed provocative and compelling new forms of expression, particularly on the Analysis / Synthesis assignment. This assignment involved writing about connections between readings, followed by curating found objects in visual and semantic form, followed by more writing.

Sensory Interfaces [Spring 2012]
The focus of this research-oriented course is to build engaging human experiences based on sensing and recognizing embodied forms of expression. Basic electronics are synthesized with theory and research in strategic HCI areas including multi-surface, ubiquitous, and proxemics. The centerpiece is the Cypress PSoC (Programmable System on a Chip), a uniquely flexible and powerful approach to integrating analog and digital signal acquisition and processing, with support from Cypress. Sensing modalities include IR, NFC, and gyro.

Fluid Information [Spring 2011]
The more information that is presented to a user, and the more capabilities for operating on it, the more difficult the presentation of an interface that communicates underlying meaning and possibilities for interaction. The limitations are rooted in human cognition: in the working memory, perceptual, and motor systems. *Fluid approaches to interaction use visual and temporal techniques to maximize communication and operational power, while minimizing motor effort and cognitive disruption.*

CSCE 689 Special Topics
Since I began as a tenure track professor in Computer Science and Engineering, I have regularly created advanced seminar / laboratory / studio courses on current research topics. In recent years, I have offered these via *CSCE 667 Advanced Seminar in Human-Centered Computing and Information* (see above). Previously, I used TAMU's Special Topics mechanism.

Motivated students benefit from working in a supportive environment that is intellectually, technologically, and scientifically challenging. They learn to conduct all phases of a research project in this field, including conceptualization, problems statement formulation, prior work investigation, algorithm development, interaction design, software engineering, evaluation, and research paper writing. Less experienced students, including undergraduates, work in collaborative teams with more experienced students. Research leading to publications and theses are produced.

Location, Location, Location [Spring 2008]
Power consumption, size, and costs of high performance computers and sensors are dropping. Multi-modal computing goes mobile. Senses of place in physical and virtual worlds are connected in mixed reality systems. We investigate technologies, examine research, and consider social practices and culture. Students engage in building, documenting, and evaluating location-aware interactive systems.

Creative and Expressive Systems [Spring 2007]
investigates the development and evaluation of interactive and mixed-initiative systems that support and promote human creativity and expression. Evaluation methods are developed, including creative ideation, information discovery, protocol analysis, and flow. The role of cognition in visualization and visual search is studied. Game logics, and their relationships to play and culture, are considered. Social media and interaction. Audio and video production skills for human computer interaction documentation are developed. Students develop and evaluate systems through solo and team projects.

Physical Interfaces [Spring 2006]
engages students in development of physical interfaces that integrate computing with human environments. To do this, they must begin with the acquisition and processing of physical signals for multimodal human computer interaction. They develop distributed wireless sensor networks for responsive environments and wearable computers. The characteristics of physiological signals such as electrodermal, respiration, electromyography, and pulse are studied. Computer vision techniques are examined. Conceptual frameworks include embodied cognition, embodied interaction, ethnography, body-based performance, and psychophysiology. These perspectives enable the design of physical and social spaces that respond to human expression. Advanced students apply pattern recognition principles while developing experiential mappings from physical sensations through sensory signals to visualization and sonification. The process of experience is emphasized.

Recombinant Media Ecosystems [Fall 2005, Spring 2002]
explores the theory and practice of *recombinant information*, in which collections are considered and represented not just as set of individual elements, but as composed assemblages that intentionally develop connections among elements. The information age transforms the surrogate of library science into the found object of conceptual art, bringing the representation of meanings into focus. This course develops the medium of digital collections. Students investigate scientific approaches, such as media semantics, meta-documents, and spatial hypertext. They integrate artistic practices for sampling and combining text, image, audio, and video (collage, montage, remix). They also consider and develop methods for evaluating interactive systems for creative experience. Projects develop applications from digital libraries to games to public installations. The course grounds the synthesis of methodologies with the meta-theory of interface ecosystems. This is a lab/studio in which students develop creative experiences as research. Students use the Max/MSP real time signal processing and integration environment.

Perceptive Sensory Systems Lab [2005-08]
I directed this teaching laboratory, and was the PI for $100,000 of funding from the College of Engineering and Computer Science Department. The mission was to create a space for students to work in courses on ubiquitous and mobile computing projects, combining fields such as human-centered computing, sensors, pattern recognition, information visualization, and multimedia. Two other faculty members participated.

CPSC 444 Structures of Interactive Information [Spring 2003, 2004; Fall 2004, 2005, 2006]
is an advanced undergrad course, which explores and connects diverse methods essential to communicating effectively with interactive information. These include programming (CSS, DHTML, JavaScript, XML), visual and interaction design, writing, hypertext theory, and cultural theory. Technological, semantic, cultural, and creative are investigated. Conceptual, visual, and algorithmic methods are invoked. Students develop *navigation*, learning to give users a sense of where they are, where they can go, and what is connected. An extensive course web site serves as a real world example of coding, design, and navigation, as well as a channel of information. Students experience the studio process of sharing work; giving and receiving constructive critique. A permanent gallery, *Must See!*, enables students to learn from each other across years.

Two major projects, the "essaysketch" midterm and the final, focus students' creative development. In the essaysketch, they must interpret, explain, illustrate, demonstrate, and connect ideas from Vanevar Bush (memex), Ted Nelson (hypertext), Jorge Luis Borges (labyrinth), Marcel Duchamp (found object), Tufte (layering), and Itten (color theory). The final project requires development of a solution to the *large collections problem*: how to present a collection of many information elements in a way that supports users' understanding of connections between them. Each student must create an ontology and information visualization method for representing a large, personal collection. In most cases, the collection they use consists of the entries in the hypermedia journal that they are required to keep throughout the term.

CPSC 610 Hypertext [Fall 2003]
I retooled this graduate course oriented toward readings of the ACM Hypertext Conference. Units include Origins of Hypertext, Notecards, Aquanet, Dexter Model, Spatial Hypertext and Informal Representations, Annotation, Nature of the Link, Back Button, Adaptive Hypermedia, Discourse Structure, Literary Perspectives, and Blogs. Invoked the strategic methodology of practice-based engagement in the context of an existing curriculum. Students took turns making presentations on each unit, using hypertext research software from the A&M Center for Study of Digital Libraries: VKB, Walden's Paths, and combinFormation. This created new connections between educational experiences and active research in our department. It gave the students first-hand working knowledge of the research tools. It also developed feedback on the tools for researchers. Students developed solo and ensemble research projects.

2000-2001 Visiting Assistant Professor
Department of Electrical Engineering and Computer Science
Tufts University. Medford, MA

- Carry a 2 - 2 teaching load.
- Develop 1 new course; overhaul 2 other courses from the ground up.
- Human Computer Interaction, a survey course for graduate students. Develop curriculum, which considers state of the art literature in the field. Challenges students to blend disciplines.

Comp 150-PWI | 150-CM Public Web Installation [Fall 2000, Spring 2001]
In this course, the students collaborated with me to produce *JumboScope*, a single research project / site-specific art installation, which was exhibited in the Boston Cyberarts Festival. The course was run in a highly participatory fashion. Some students took turns facilitating the entire class. Working groups were self-organizing, and responsible to each other. Scientific, technological, and artistic methodologies were integrated. The conception and flow of site-specific intervention in public spaces. The design of space and interaction. Theory and practice of advanced, distributed, multi-tier web architectures. Political issues of community representation and institutional standards in media curating. The composition of events in time and space. High performance multimedia databases. Server-side programming with Java and Oracle. Browser programming with CSS, HTML and Java/Script. Streaming video. Intelligent agents. Usability evaluation and testing. The marketing of ideas and technology. Consensus process and group decision-making.

Comp 106 Programming for Graphical User Interfaces [Spring 2001]
Overhauled a course that had been previously based on X-11 Motif, with a final project based on office automation, and completely revamped it. I developed a new curriculum, using Java, object-oriented techniques, computer graphics, and multimedia. The students created projects that were games. This related both to current industry developments, and to their interests. Much excitement was generated.

Comp 171 Human Computer Interaction [Fall 2001]
is a graduate / upper division undergraduate introductory course. I revamped the course to use primary research source materials, such as Norman's Everyday Things, Suchman's Situated Actions, and Geertz's Interpretation of Culture, in addition to standard HCI texts.

1997 Lecturer
MFA Program in Digital Design
Parsons School of Design
New School University. New York, NY

Interactive Java Programming Developed an innovative curriculum for teaching artists to program. Developed a curriculum for "Interactive Java Programming". Supported students with widely varying levels of programming experience and a priori knowledge. Developed course web site.

1999 Teaching Assistant
Department of Computer Science / Media Research Lab
NYU. New York, NY

Multimedia Brought interdisciplinary concepts, such as design and culture, into the curriculum of an undergraduate multimedia class in the computer science department. Motivated students to elevate work. Developed a "Grader's corner" segment of class in which the best student work was displayed and critiqued.

1994 Research Associate
International Centre for African Music and Dance
University of Ghana. Legon, Ghana

Macintosh for Everyone Developed a curriculum for teaching basic computer skills to West African researchers, working in fields such as traditional music and dance practice and ethnography / ethnomusciology.

Artist • Composer • Director

http://ecologylab.net/sound/

EXHIBITIONS AND INSTALLATIONS

May 2012	Moeller, J. (*), Kerne, A., Hamilton, W. (*), Webb, A. (*), Lupfer, N. (*) *ZeroTouch: An Optical Multi-Touch and Free-Air Interaction Architecture* ACM CHI Interactivity, Austin, TX.
May 2011	Moeller, J. (*), Kerne, A., *ZeroTouch: A Zero-Thickness Optical Multi-Touch Force Field* (large scale), ACM CHI Interactivity, Vancouver, Canada.
August 2006	Stenner, J., Kerne, A., Williams, Y., *Playas: Homeland Mirage*, ISEA / ZeroOne juried by Steve Dietz, et al.
June 2006	Toups, Z., Overby, K., Kerne, A., Graeber, R., Cooper, T., Aley, E., *Censor Chair*, ACM SIGCHI Intl. Conf on Advances in Computer Entertainment Technology. Juried by Victoria Vesna, et al.
November 2005	Stenner, J., Kerne, A., Williams, Y., *Playas: Homeland Mirage*, ACM Multimedia Conference Art Exhibition. Juried by Alejandro. Jaimes, Jeffrey Shaw, et al.
May 2005	Kerne, A., and Interface Ecology Lab, *combinFormation*, International Festival of Electronic Arts, Maribor, Slovenia (invited). Juried by Peter Weibel, et al.
February 2003	Schiphorst, T., Kozel, S., Andersen, K., Mah, S., Jaffe, N., Kerne, A., Lovell, R., *Whisper*, Dutch Electronic Arts Festival, Rotterdam, The Netherlands.
August 2001	Kerne, A., *CollageMachine*, SIGGRAPH 2001, Los Angeles Gallery/N-Space.
June 2001	Kerne, A., *CollageMachine*, in "Brave New Word," Works and Process," Guggenheim Museum, New York.
May 2001	Kerne, A., *CollageMachine*, Electronic Literature Organization Awards, New York.
April - May 2001	Kerne, A., and students of Tufts Comp-150, *JumboScope* (with *CollageMachine*), Boston Cyberarts Festival.
April 2001	Kerne, A., *CollageMachine*, Digital Arts and Culture, Providence.
2000 - 2001	Kerne, A., *CollageMachine*, New York Digital Salon (NYC, Spain, London, Beijing).
1997	Kerne, A., Lang, M., Kofi, F., *Coded Messages: CHAINS*, New York Digital Salon.
1995	Perlin, K. et al, Kerne, A., *Interacting with Virtual Actors*, SIGGRAPH Emerging Technologies.
1995	Perlin, K. et al, Kerne, A. *Improvisational Animation*, SIGGRAPH Electronic Theater.
1995	Kerne, A., Lang, M., Kofi, F., *Coded Messages: CHAINS*, Springtij Festival, Amsterdam.

RESIDENCIES

Spring 2013	Sabbatical Residency, The Mixed Reality Lab, Dept. of Computer Science, University of Nottingham
June 2008	Dagstuhl Seminar on Contextual and Social Media, Germany
June - July 2002	V2 Lab, Schouwburg Theatre, Rotterdam, The Netherlands
February 2002	Weblab Crossover, Jacksonville, Florida, USA

1995 **Sound designer, video editor**
NYU Media Research Lab

Digital Audio & Video

- Sound design/sonification for SIGGRAPH 95 *Virtual Actors* installation. Real-time generation of spoken voices and Foley effects using CSound. LPC analysis and resynthesis. Events triggered by animated character behaviors, and the user via video motion tracking, sound peak detection, and voice recognition. Scripts in Perl, M4, and Make to automate development and testing. Multi-processor systems integration with SGI Onyx Reality Engine, Indigo Power Extreme, and Indy.
- KPL programming to integrate with Perlin's Noise-driven Improv system.
- Digital video editing of *Improvisational Animation* video featured in SIGGRAPH 95 Computer Animation Festival, and by Media Research Lab for marketing and demonstrations.
- Research combining acoustics and speech recognition.

1994-5 *Coded Messages: CHAINS.* http:/ecologylab.net/chains
Composer / director / librettist / art director / audio engineer
PANAFEST 94. Cape Coast Castle, Legon-Accra, Anyako, Ghana
Intercultural Media, Digital Audio & Video, Human Computer Interface, Navigation, Performance Ecology, Structured Improvisation, Polyrhythmic Frameworks, West African Drum/Dance, Semiotics, Percussive Poetry

- Direct rehearsals of an opera = performance ecosystem featuring 6 Ghanaian drummers and dancers.
- Compose multilingual, intercultural music, movement, percussive poetry, and text sequences.
- Collaborate with master drummer / choreographer Francis Kofi and translator Gustav Hlomatsi to develop an intercultural conceptual framework based on traditional *Eve* drum language texts and ready-made American advertisements.
- Select provocative sites for site-specific performances such as the historic Cape Coast slave trade Castle, and the remote village of Anyako. Develop a ground plan for each site.
- Hire and direct 3-camera video team. Edit digital video. Digital audio post-production.
- Grant from Dance Theatre Workshop Suitcase Fund / Rockefeller Foundation, $5000.
- 1 award (Prix Ars Electronica Honorary Mention).
- 2 exhibitions.

1994-95 **Research Affiliate, consultant**
International Centre for African Music and Dance
University of Ghana, Legon, Ghana
Intercultural Media, Digital Audio, West African Drum/Dance, Databases

- Create interactive multimedia database dictionaries for indigenous languages including *Eve* and *Mandinka*. Collaborate with native language scholars. Printed dictionaries for these languages are not generally accessible.
- Study of *Eve*, *Dagomba*, *Mandinka* and *Susu* drumming and dancing with master artists.
- Create a database of West African performance forms.
- Teach *Macintosh for Everyone* workshops to faculty and other scholars.
- Generate technical reports to enable non-technical management to make development choices.
- Specification, purchasing, installation, integration and testing of computer and audio studios.

1991-95 **Technology director, sound designer**
Creating Media
San Francisco, CA, Middletown, CT, New York, NY
Intercultural Media, Digital Audio, West African Drum/Dance

- Audio post-production of Deep Fieldwork Cross-section CD.
- Design and construct an off-grid mobile recording studio to meet versatility, weight and performance specifications. Custom modular power system includes solar panels, Ni-Cd batteries, smart chargers, and 12 V mini-grid.
- Specification and systems integration of mobile audio and multimedia studio including DAT, Schoeps microphones, phantom powered pre-amp, Mogami cabling, lightweight waterproof flight case, PowerBook, Pyropen, parts.
- Deep Fieldwork production: studio-quality field recordings of a spectrum of West African music traditions, including The Gambia's finest griots, Voodoo Trance drumming in Togo, and the Ashanti royal court drum and horn ensemble.
- Recording sessions' producer: hire and supervises artists and technicians.
- Digital Audio Workstation (DAW) specification, purchasing, integration, & testing.
- Multi-track and field digital recording studio engineering, for projects including *West African Music Traditions for Drumset*, by Abraham Adzenyah and Royal Hartigan, Manhattan Music Publishers.
- Digital Audio editing for CD's and sound tracks.

1993 ***the economic survival rite of passage.***
Composer / director, technology director, sound designer, art director
World Music Hall, Middletown, Connecticut
Intercultural Media, Polyrhythmic Frameworks, Digital Audio, Structured Improvisation, Percussive Poetry

- Direct an opera = performance ecology for 8 musicians, 5 danceActors, 5 dancers, and live electronics. Lead a production team of 50. Run rehearsals and production meetings.
- Composer/librettist. Develop music, words, and drama for 8 musicians, 5 danceActors, 5 dancers, and triggered audio samples. Building blocks include polyrhythmic frameworks, structured improvisation, dynamic signals, ensemble transition logics, found sounds, poetry, and narrative.
- New graphical/text scoring techniques, embodied in *script/score*, to represent new media form.
- Technical design for live 24-track digital recording and 3-camera video shoot with radio lavaliers, wireless clearcom, Macintosh-hosted Sample Cell and OMS MIDI, sound reinforcement, and SMPTE distribution.
- Design, field recording, and editing of *concrete* digital audio samples:
  typewriter, fax, glass breaking, whip crack.
  Design and implementation of triggering system for live performance.
- Recording studio engineering of mix downs.
- Editing of video. Post-production lockup of picture & sound with Digidesign ProTools.

4/94 **Percussionist. Jali Madi Kanuteh Ensemble**
Gambia National Radio. Banjul, The Gambia

West African Drum/Dance, Polyrhythmic Frameworks: Traditional Mandinka repertoire.

12/93 **Percussionist / dancer. C.K. Ladzekpo Ensemble**
East Bay Center for the Performing Arts. Richmond, CA, USA

West African Drum/Dance, Polyrhythmic Frameworks: Traditional Ghanaian repertoire.

1993 **Composer / director / librettist, technology director**
the economic survival rite of passage
World Music Hall, Wesleyan University, Middletown, Connecticut

Intercultural Media, Polyrhythmic Frameworks, Digital Audio, Structured Improvisation, Percussive Poetry

- Direct a full scale dance theater opera = performance ecology. Lead a production team of 50.
- Compose music; author words, and drama for 8 musicians, 5 danceActors, 5 dancers, and triggered audio samples. Building blocks include polyrhythmic frameworks, structured improvisation, dynamic signals, ensemble transition logics, found sounds, poetry, and narrative.
- Design & edit *concrete* digital audio samples: typewriter, fax, glass breaking, whip crack.
  Design and implementation of triggering system for live performance.
- New graphical/text scoring techniques, embodied in *script/score*, to represent new media form.
- Collaborate with production manager Melissa Lang, environmental designer Ben Ledbetter, and drummer Royal Hartigan.

5/89 **Composer / director / librettist**
7/89 **Re: wasteland cycle**
4/92 Cal Arts, Valencia, California
Martin De Porres, San Francisco, California
with "local memory", "deer dance south of market
World Music Hall, Wesleyan University, Middletown, Connecticut

Polyrhythmic Frameworks, Digital Audio, Structured Improvisation, Percussive Poetry, Performance Ecology

- Composer/director/librettist: opera (ecology) for 4 musicians, 5 danceActors, and triggered audio.

8/92 **Director / percussionist. Agolona Sabor Afro-Cuban**
Martin DePorres, San Francisco.

West African Drum/Dance, Polyrhythmic Frameworks: Leader of a traditional Afro-Cuban drum/dance ensemble featuring master artists Judith Justiz and Treviño Leon.

12/91 **Percussionist. Pandemonium Steel Orchestra**
Avery Fisher Hall, Lincoln Center, New York, New York

West African Drum/Dance, Polyrhythmic Frameworks: Traditional and contemporary steel pan repertoire.

7/91 **"Barren Threshold"**
Marvin Gardens, San Francisco, California

Percussive Poetry, Dance: Solo performance ecology.

7/90 **"Occluded Views"**
Club Kommotion, San Francisco, California

Percussive Poetry: Solo performance.

7/90 **Composer / percussionist. Meryl Jones Ensemble. "Momentum"**
Eighth Street Studio, Berkeley, California

Structured improvisation: Compose and perform collaborative structured music and dance improvisations in collaboration with choreographer.

12/90 **Composer. "Illegal Entry"**
Cal Arts, Valencia, California

Digital Audio
Tape soundtrack for Olive Whites' performance about strip-tease and violence against women.

10/88-12/89 **Percussionist. Cal Arts African Ensemble**
Japan America Theatre, Los Angeles + Cal Arts, Valencia, California, et al

West African Drum/Dance, Polyrhythmic Frameworks
Traditional Ghanaian repertoire. 12/89: Featured as lead drummer.

10/88-5/89 **Percussionist. CalArts Balinese Gamelan**
Barnsdall Art Park Gallery Theatre, Los Angeles, California
Festival of Masks, L.A. County Art Museum Grounds, et al

Traditional Balinese Dance Drama and other repertoire.

8/88 - 9/88 **Composer / poet / percussionist. "Dry Snake Dreams"**
Maelstrom Bookstore, San Francisco, California, et al

Structured Improvisation: Collaborative integrated media performance fusing poetry, music and movement. All elements of composition and performance based on collective process.

11/87 **Composer / director / performer. "The Deer Dance South of Market", et al**
The Paradox, San Francisco, California

Polyrhythmic Frameworks, Structured Improvisation, Percussive Poetry:
Ensemble and solo percussive poetry.

Advisees

Ph.D. Advisees

[1] Jack Stenner, 8/07 Architecture / Visualization (principal advisor; co-advisor is Carol Lafayette), Playas: Homeland Mirage - A Case Study in the Understanding of Critical Reflection in a Digital Media Artwork, Current position: Associate Professor of Digital Media, University of Florida.

[2] Eunyee Koh, 8/08, Representing Combined Searches with Image+Text Surrogates extracted from Web Pages,
Current position: Senior Research Scientist, Adobe Research Laboratories, San Jose.

[3] Zachary O. Toups, 8/10, Team Cognition: A Location-Aware Augmented Reality Game Teaches Implicit Coordination Skills to Emergency Responders. Summer 2009: Intern, Yahoo Research,
Current position: Assistant Professor, Department of Computer Science, New Mexico State University; Assistant Research Professor, Texas A&M Department of Computer Science and Engineering.

[4] Andrew Webb, 5/15 (expected).

[5] William Hamilton, 5/16 (expected).

[6] Yin Qu, 5/16 (expected).

[7] Rhema Linder, 5/17 (expected).

[8] Nic Lupfer, 5/18 (expected).

[9] Ajit Jain, 5/18 (expected).

Masters Advisees

[10] Madhur Khandelwal, M.S. Computer Science, 5/04, *Semantics of Time Travel in a Generative Information Space*, Current Position: Co-Founder, Scandid. Previous Position: Software Design Engineer, Microsoft.

[11] Mirko Mandic, M.S. Computer Science, 12/04, *Visualizing Rhythms of Intimacy in Email Communication*, Current Position: Senior Program Manager Lead, Microsoft.

[12] Andrew Webb, M.S., 8/07, A Transitory Interface Component for In-Context Visualization and Adjustment of a Value.

[13] Abhinav Mathur, M.S., 12/09, Meta-Metadata: An Information Semantic Language and Software Architecture for Collection Visualization Applications. Current Position: Computer Scientist, Adobe.

[14] Nabeel Shahzad, M.S., 12/11, S.IM.PL *Serialization: Type System Scopes Encapsulate Cross-Language, Multi-Format Information Binding.* Current position: Software Engineer, Microsoft.

[15] Jonathan Moeller, M.S., 12/14 (expected). Current Position: Technical Director, Midnight Commercial.

[16] Nic Lupfer, M.S., 12/14, *Beyond the Feed and Board: Holistic Principles for Expressive Web Curation.*

[17] Shenfeg Fei, M.S., 12/14, *Co-located Collaborative Information-based Ideation through Embodied Cross-Surface Curation.* Current Position: Software Engineer, Google.

[18] Ajit Jain, M.S., 12/14, *TweetBubble: A Twitter Extension Stimulates Exploratory Browsing.*

Research Experiences for Undergraduates

[19] William Hamilton, 2008-10, Team Coordination (TeC) Game design and data analysis.
2009 Winner TAMU Computer Science and Engineering Undergraduate Researcher of the year (as a junior),
2010 Winner TAMU Computer Science and Engineering Undergraduate Researcher of the year.
2010 Honorary Mention CRA Outstanding Undergraduate Research Awards.
Presently Ph.D. student, Texas A&M Dept Computer Science & Eng.

[20] Jon Moeller, 2008-10, scanning FTIR multitouch sensor, ZeroTouch, combinFormation video, IR model, term dictionary, bug fixes, web launch.

[21] Nic Lupfer, 2009-10, combinFormation. Current Position: Ph.D. student, Texas A&M Dept Computer Science & Eng.

[22] Sarah Berry Cranston, 2006-7, Using Image and Text Surrogates to Promote Creativity in the Design Process. Current Position: Associate Manager, User Interface, Accenture.

[23] Megan Schneider, 2007, A Preference Editor Generator through Semantic Translation. M.S. Computational Linguistics, University of Washington. Current Position: Senior Software Engineer:, Yapta.

[24] Ross Graeber, 2004, Representing Location-Based Semantic Information with Constant Information Density. Current Position: Software Engineer, Valtech.

[25] Jason Jho, 2000-1, CollageMachine / JumboScope installation. Current Position: Tinkerer, Project Florida.

[26] David Lyons, 2010-, combinFormation video. Current Position: 3D Artist, Slingshot.

[27] Brett Hlavinka, 2010, Trans-surface Rummy. Current Position: Associate, Pariveda Solutions.

[28] Julio Montero-Rexach, 2011-13, ZeroTouch electronics and firmware.

[29] Thomas Robbins, 2011-12, Pen-in-hand Command. Current Position: Student, SMU.

[30] Bryant Poffenberg, 2011-13, InfoComposer, IdeaMÂCHÉ. Current Position: Software Developer, @hand Corporation.

[31] Oliver Garretson, 2013-14, game streaming ethnography.

[32] Claire Snodgrass, 2013-14, digital curation ethnography.

[33] Yvonne Chen, 2013. Current Position: Ph.D. student, computer science, University of Washington.

[34] Katherine Chan, 2014. Current Position: undergraduate, Oberlin College.

[35] Elizabeth Kellogg, 2014, Supporting Creative Visual Design with Pen and Multi-touch Gestures.

[36] Kade Keith, 2014, Monadic Visualization of Metadata Networks to Support Exploratory Browsing.

[37] Matthew Carrasco, 2014, Exploratory Search Interface.

[38] Cameron Hill, 2014.

Other

[39] Jean M. Mistrot, 2002-4, Viz, M.S. worked extensively with the Interface Ecology Lab, including as student worker: user interface design. Current Position: VP Product Development / Studio Art Director / Technical Art Director, A.C.R.O.N.Y.M GAMES.

[40] Alan Blevins, M.S., Viz, Location-Aware Team Games for Emergency Response. Current Position: Pipeline Engineer, DreamWorks Animation.