# Erik W. Conrad

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## EDUCATION

**Ph.D. student, Arts Research**–Special Individualized Programs
Topological Media Lab, Concordia University | current
Advisor: Dr. Sha Xin Wei [http://www.topologicalmedialab.net]

### M.S. Information and Computer Science
Arts, Computation and Engineering. University of California Irvine | 2005
Thesis Committee: Beatriz da Costa, Dr. J. Paul Dourish, Dr. Felicity Scott

### M.S. Information Design and Technology
School of Literature, Communication and Culture. Georgia Institute of Technology | 2002
Thesis Committee: Dr. Sha Xin Wei, Dr. Kenneth Knoespel, Stephanie Strickland

### B.A. Visual and Performing Arts
Imaging and Digital Arts. Minor: Art History and Theory, 19th and 20th centuries, University of Maryland Baltimore County (cum laude) | 1999

## TEACHING

**Visiting Assistant Professor**, University at Buffalo, Department of Media Study **current**

‣ **Sewing Circuits and Wearable Media** (DMS434, DMS53, VS510 DMS, ARC596 CON) **Spring 2010**
This production course explores the expressive potential of soft circuitry and wearable media. We will explore the materials and construction techniques of "soft computing" (conductive fabrics, yarns, etc.) to create expressive objects and interactive fashions. Technologies are not merely exterior aids, but interior changes of consciousness. They affect how we understand ourselves by co-structuring possibilities of thought. The focus of this course will be the interaction and interrelationship between soft technologies and bodies.

‣ **Introduction to Media Analysis** (DMS259 B) **Spring 2010**
This course provides an historical and theoretical context for thinking-writing-making media. We will look at media in a broad context, starting with discussions about human perception and representation and ending with contemporary concerns around networks, ownership and surveillance. Along the way, we will read classic texts from 20th century media theory, including essays by McLuhan, Habermas, Adorno, Benjamin, Baudrillard, Debord, etc. This will be complemented with contemporary texts by the likes of Virilio, Hayles, Rheingold and Turkle. This course aims to strengthen the connection between text and experience, and to that end we will also spend a considerable amount of time experiencing media by seeing, hearing and otherwise interacting with works from film, video, sound, music, photography, painting, games, performance, digital art, etc. In the Department of Media Study, we believe that making media can be as analytical and critical as writing about media, and where appropriate, students may respond to assignments in the form of their choice. Fulfills Intro to Interpretation or Media Study Elective

‣ **Responsive Media: Real-time Audio and Video Synthesis** (DMS 434) **Fall 2009**
This course will introduce the tools and techniques for authoring real-time media systems with Max/MSP/Jitter. Max is a graphical programming environment designed to handle the basic elements of media: time, interactivity, and control. MSP adds the ability capture, synthesize and manipulate audio, while Jitter does the same for video and more. Although the course will emphasize work that utilizes real-time computation–live video or sound art, interactive work, installation or performance–students may choose to apply the tools towards the creation of more traditional, or non-real-time, works such as generative, genetic or evolutionary compositions of sound and/or image. No previous experience with Max or computer programming is required, but some background in media production (video, animation, sound or music) will be very helpful.

**Lecturer** - **Rhode Island School of Design**, Digital+Media
‣ **Interactive and Reactive Media Environments** (D+M 7150) **Spring 2009**

In this course we will examine ways of 'materializing' space–infusing it with life–through the combination of computational and critical tools. As installations, performances or architectural interventions, students will design and build responsive media environment-events combining material and plastic arts with realtime computational media. A combination of technical, practical and conceptual skills will be covered with the goal of creating experientially rich spaces. A theoretically diverse approach will be taken, with ideas from art, architecture, neuroscience, phenomenology and computer science surfacing throughout. Technical topics will include realtime audio/video synthesis, media choreography, sensing, active materials and computer vision, explicitly for the design and implementation of large scale, realtime responsive media environments.

‣ **Network Landscapes** (D+M 7019) **Fall 2008**
Landscape and network have intersected in new genres including locative media and collaborative cartography. Social practices including mobile social networking, spatially distributed games, multi-user environments, and software platforms such as Google Earth, Platial and Flickr are all part of the contemporary vernacular landscape. Geo-spatial information systems such as satellite imagery, GPS and remote sensing converge in professional research and design software, further expanding the range of electronic and digital modes of landscape representation. The result is a profound shift in the cultural meaning of landscape and our place as human beings within it, as well as a growing awareness of ecological issues and the global scale of landscape, technology, network and subjectivity. The goal of this studio is to consider landscape in this context, which Teri Rueb refers to as the "network landscape" condition, by generating creative, critical and poetic designs, experiences, interventions.

‣ **Thesis Committees/Independent Study**
  - Donko Jeliazkov. Digital+Media, Thesis Committee member, graduation: *Spring 2009*
  - Bundith Phunsombatlert. Digital+Media, Thesis Committee member, 2010. Ind. Study, *Winter 2009*
  - Danqing Shi. Digital+Media, Thesis Committee member, graduation: *Spring 2009*
  - Meena Satnarain. Digital+Media, Independent study, *Winter 2009*

## Instructor - **Concordia University (Montréal)**, Computation Arts
‣ **Tangible Media and Physical Computing** (CART 360) **Fall 2005**
This course explores the concepts of tangible media and physical computation as well as related concepts of ubiquitous computing, wearable computing, and interaction design. The focus is on conceptual development, prototyping, and implementation of tangible media and physical computing artifacts from the perspectives of technical proficiency, functionality, aesthetics, and personal/social meaning.

## Instructor - **University of California Irvine.** Claire Trevor School of the Arts
‣ **Multimedia Arts** (Arts 50) **Fall 2003**, **Winter 2004**, **Spring 2004**, **Fall 2004**, **Winter 2005**, **Spring 2005**
Multimedia Arts is part of the Digital Arts Minor core curriculum. Under my direction, this course became an introduction the aesthetics, theory and practice of electronic arts to UCI undergrads from all departments, while teaching them the basics of programming and design for the internet.

## Instructor - **University of Maryland Baltimore County.** Department of Visual Arts
‣ **Responsive Spaces: Interactive Video and Sound** (ART 487/ART 649) **Spring 2003**
Introduced a special topics undergraduate/graduate course in experimental interfaces (sensors, video tracking, speech recognition, etc.) and real-time audio/video synthesis with Cycling 74's Max/MSP/Jitter

‣ **Advanced Interactivity** (ART 486) **Fall 2002, Spring 2003**
This course provides an in-depth exploration of advanced tools, theories, and applications of interactive media as they are used for creative inquiry, research and production. Projects develop both creative and technical proficiency with advanced computational media including software and hardware. Students will begin developing concepts and prototypes for larger scale projects including installation, performance and responsive objects.

‣ **Interactivity** (ART 382) **Fall 2002, Spring 2003, Summer 2003**
This course provides an introduction to interactivity as a medium for creative inquiry. The class explores digital interactive media with respect to its context in the history of technologies of representation, comparing the ways in which past 'advances' in technology (e.g.. from speech to writing) have inherently affected communication itself with modern advances in technology.

WORKSHOPS
**Instructor** | Basic Electronics + Arduino: I, II & III
‣ **Rhode Island School of Design**, Digital+Media.  Oct. 18, Oct. 20, Nov. 1, 2008

**Instructor** | Electronics and Micro-controller Workshops
‣ **Rhode Island School of Design**, Digital+Media.  June 13-14, 2006
‣ **Concordia University**, Studio Arts–Fibres.  May 2-3 and May 17-19, 2006

EXHIBITIONS/WRITINGS/SPEAKING
**2009**

‣ (forthcoming) **AI & Society** (Special issue on 'Soft Architecture', edited by Sha Xin Wei. ) Springer London.  Essay: "Soft Architectures for Everyday Life."

‣ **Riders on the Train.**  Axiom Center for New and Experimental Media.  "kinaesthetic double double", kinetic sculpture.  Boston, MA  November 10 - December 12, 2009

‣ **Pixilerations [v.6] a festival of digital media and interactive performance**.  "bark rubbings: bark rubbings: city as forest"–wearable tactile display, GPS, mediascape and custom electronics. Providence, RI September 24 - October 11, 2009

‣ **Dorkbot Buffalo**.  Presented "bark rubbings" to "people doing strange things with electricity."  Sugar City, October 1, 2009

‣ **Embodiment & Mobility Symposium.**  Department of Digital + Media, Rhode Island School of Design.  Presentation: "Thinking Through the Skin: Art for the Sense of Touch."  Other speakers include Christiane Paul, Kelly Dobson, Chris Salter, Teri Rueb and Francisco Ricardo.  April 3, 2009.

**2008**

‣ **Transposing Bumpkin Island's Art Encampment and Community,** as part of Fort Point Open Studios, curated by Carolyn Lewenberg, Megan Dickerson, Jed Speare.  A Tactilist Theatre [documentation + written statement] Boston, MA  October 17 - 19, 2008.

‣ **Pixilerations [v.5] Fragments and (W)holes**, FirstWorksProv Festival.  Interactive Installation: "1.1.1. Reading a wave"  Providence, RI, October 2 - October 12.

‣ **Bumpkin Island Art Encampment**  participatory performance: "A Tactilist Theatre : poems told by touch"  Berwick Research Institute, Studio Soto and the Island Alliance, Boston Harbor Islands, August 28 - September 2.

‣ **Young Investigator's Forum on Culture Technology 2008**  Paper: "Vibrotactile Displays and Embodied Experience."  Korea Advanced Institute for Science and Technology (KAIST) Daejeon, Republic of Korea August 22-23.

‣ **First International Conference on Critical Digital: What Matter(s)?**  Paper:  "Rethinking the Space of Intelligent Environments."  Harvard Graduate School of Design, Cambridge, MA  April 18 - 19.

‣ **ImageRadio: interactive experiments in public space**.  "Palpable City: Eindhoven."  site-specific mobile tactile installation.  MAD Emergent Art Center, Eindhoven, Netherlands

‣ **Hexagram** (Projection Room).  "Troglodyte"  architectural intervention.  Erik Conrad, Justyna Latek and Josee-Anne Drolet.  March 15, Montreal, Canada

**2006**

‣ **UMBC 40th Anniversary Alumni Exhibition**. Documentation video of installations "Troglodyte" and "Firewall" October 7–November 17.  The Commons, UMBC, Baltimore, MD

‣ **Journées de la culture**, "Firewall" Responsive Video Installation with Freida Abtan and Harry Smoak.  September 29-31, Place des Arts' Hall des Pas perdus, Montreal.

‣ **Subtle Technologies Symposium**.  Paper "Embodied Space for Ubiquitous Computing"  Toronto, Canada

‣ **CHI 2006** Workshop – invited participant "About Face Interface: Creative Engagement in New Media Arts and HCI"  Position paper: "Towards Embodied Spatial Interaction." Montreal, Canada.  Other invitees included Sara Diamond, Simon Penny, Tiffany Holmes

‣ **Dancing the Virtual** – participant, part of "Technologies of Lived Abstraction" conference at SAT (with Brian Massumi, Erin Manning, Sha Xin Wei, Christopher Salter) Montreal, Canada

**2005**

‣ **CALIT2 Graduate Student Conference on Social and Cultural Aspects of Science**, "Wearing Embodied Space." Irvine, CA.

‣ **Hybrid Vigor**. Beall Center for Art and Technology, "TactileSpace," wearable outdoor installation. Irvine, CA

**2004**

‣ **International Symposium for Wearable Computing (ISWC) 2004**, Student Colloquium Poster: "Wearing Embodied Space." Arlington, VA.

‣ **Hybrid Vigor**. Beall Center for Art and Technology, "study: gesture | water | light," responsive light installation. Irvine, CA

‣ **ISEA 2004**. "Where Are We Eating: BALTIMORE," internet streaming + radio broadcast performance

**2003**

‣ **SIGGRAPH** San Diego. Sketches and Applications: "aether: reading with tactile vision".

**2002**

‣ **Graphics, Visualization and Usability Center** Demo Day. Georgia Tech, "aether: an experiment in the phenomenology of reading." Atlanta, GA;

‣ **Information Design and Technology** Demo Day. Georgia Tech, Wesley Center for New Media, "aether: an experiment in the phenomenology of reading." Atlanta, GA

**2001**

‣ **Wesley Center for New Media**, Georgia Tech, *Architecture of Responsive Spaces.*, Atlanta, GA "Invisible Relations." Outdoor installation. Yoichiro Serita, Erik Conrad, Maryann Westfall, Elizabeth Adams.

‣ **Art Frankfurt**, Germany. *Webcast Lounge*. "an Odyssey (of sorts)" –net art narrative

‣ **Wesley Center for New Media**, Georgia Tech. *From Representation to Performance* f0unta1n – tangible/intangible narrative space

**1999**

‣ **MASSAGE 4.0** by NOMADS "untitled" –interactive, script driven pattern animation http://www.nomadnet.org

## ARTIST TALKS

‣ University of Houston School of Art. April 2009.

‣ University of Nebraska Lincoln, Hixson-Lied College of Fine and Performing Arts. March 2009.

‣ University of Buffalo. School of Architecture and Planning. November 2008.

‣ New Jersey Institute of Technology. College of Architecture and Design. April 2008.

‣ University of the Arts. (Philadelphia) College of Media and Communication. April 2008.

‣ Rhode Island School of Design. Digital + Media. Teri Rueb's Network Landscapes course. October 2007.

## PRESS/PUBLICATIONS

‣ The Providence Phoenix. Greg Cook. "The digerarti: 'Pixilerations' plugs in Providence art" October 2, 2009
  http://thephoenix.com/Providence/Arts/90574-digerarti/

‣ Providence Journal Online. FirstWorks Pixilerations in Providence (video) http://www.projo.com/video/?z=y&nvid=291521&shu=1

‣ Boston Globe. Cate McQuaid. "Artists colonize a harbor outpost." August 30, 2008. [photo online] http://www.boston.com/ae/theater_arts/gallery/bumpkin?pg=6

‣ The Boston Phoenix.  Ian Sands.  "Yes, but why?" September 3, 2008.  http://thephoenix.com/Boston/Arts/67586-Yes-but-why/

‣ Networked Performance.  Jo-Anne Green.  May 4, 2008.  http://transition.turbulence.org/blog/2006/05/04/palpable-city/

‣ IaaC Blog (Institute for Advanced Architecture Catalonia) Georgios Machairas November 19, 2007 http://www.iaacblog.com/readings/?p=117

‣ Space and Culture Blog "City as Vibrotactile Rhythms" June 1, 2006.  http://www.spaceandculture.org/2006/06/01/city-as-vibro-tactile-rhythms/

‣ "Topological Media Lab catches fire with kids" Marc Losier.  Concordia Journal.  October 12, 2006 http://cjournal.concordia.ca/journalarchives/2006-07/oct_12/007785.shtml

‣ We-Make-Money-Not-Art.  "Wearing Tactile Space" May 2, 2006.  http://www.we-make-money-not-art.com/archives/2006/05/palpable-city-a.php

## SERVICE

‣ Invited Critic - University of Toronto, Daniels School of Architecture, ARC 3041 Responsive Environments and Interactive Spaces (Nashid. Nabian and Rodolphe el-Khoury) Fall 2009

‣ Invited Critic - University at Buffalo, Department of Architecture, ARC 606- Upper Level Research Studio: TURBULENCE AIR RESPONSIVE ARCHITECTURE (Omar Khan) Fall 2009

‣ University at Buffalo, Department of Media Study.  PhD in Media Study committee, Fall 2009 (while part-time)

‣ Invited Critic - Rhode Island School of Design, Graduate Studies,  Embodied Computation: Design for Fashion, Information and the Body with Amber Frid-Jimenez. Spring 2009

‣ Invited Critic - Rhode Island School of Design, Digital+Media Semester Critiques, Fall 2008

‣ Invited Critic - Harvard Graduate School of Design, Kinetic Architecture, Kostas Terzidis, Fall 2008

‣ Invited Critic - Rhode Island School of Design, Digital+Media Final Critiques Fall 2007

## RESEARCH + CREATIVE/TECHNICAL POSITIONS

Technical Director | **Open Air Studio** | Current | Open Air Studio (Teri Rueb and Erik Conrad) is a research and creative design firm that focuses on mobile interfaces to support education and inclusiveness.  Rueb and Conrad have a combined 20+ years experience creating award-winning mobile artworks and alternative interface designs.

Research Assistant  | **Topological Media Lab**, **Georgia Tech/ Hexagram**, **Concordia University** | September 2005 – 2007, January 2001– May 2002 | Involved with Caligraphic Video and Soft Architecture research as well as Wearable and Gestural Media research projects under Director Dr. Sha Xin Wei.  Responsible for deployment of TGarden research system (electronics, sensor data analysis, gesture and video tracking, interaction and visual design) Served as primary physical computing resource for TML classes and students.

Research Assistant  | **Ingrid Bachmann, Hexagram–Interactive Textiles and Wearable Computing**, Faculty of Fine Arts, Fibres, Concordia University. | May 2006 - 2007 | Developed custom hardware and software for "Symphony for 54  Shoes (Distant Echoes)," a kinetic sculpture, for Neutral Ground Art Gallery, Regina, SK September 2006.

Electronic Arts Associate  | **Banff Centre for the Arts** | Summer 2001 | Design and production of various new media projects for artists in residence. Interaction design and programming for the web, sensors and real-time interactive video.  Led Director/Lingo workshop for Banff Centre work/studies.

Research Assistant  | **Diane Gromala**, **Georgia Tech** |August 2000 – May 2001|  Project management and production of video documentation of SIGGRAPH 2000 Art Gallery; assorted web and presentation design; various research tasks including the evaluation of potential technologies for biomorphic typography.

Research Assistant/Programmer | **Teri Rueb**, **UMBC** | Summer 1999 |  Responsible for programming interface between GPS input and interactive sound installation along hiking trail; web design, photography, etc.

## TECHNICAL SKILLS

‣ **Programming + Multimedia**
  Cycling 74 Max/MSP/Jitter, PD, Mscape, Processing, Macromedia Director (lingo),  Flash (ActionScript), BASIC, PicBASIC, C, Java, C++, Perl, Pascal
‣ **Physical Computing**
  micro-controllers  (PIC, BASIC stamp, Arduino), electronics, sensors, video tracking, GPS, RFID, wearable and ubiquitous/pervasive computing
‣ **Internet**
  HTML, CSS, JavaScript, PHP, MySQL, content management (Drupal, Wordpress)
‣ **Animation + Video**
  Flash, Adobe AfterEffects, Premiere, Apple Final Cut Pro, Alias|Wavefront Maya
‣ **Misc.**
  Adobe Creative Suite, GIS (ArcInfo), Quark XPress, Mac OS, Xserve, Windows, Linux, Windows Mobile, Unix