

Burke's work in the arts and engineering explores how artists and storytellers can participate in shaping the means by which we make "digital media." He explores how emerging technologies can be designed to serve expressive and social goals, and focuses on the rich opportunities for synthesis across disciplines such as performance, film and video, installation, architecture, and systems engineering.

He has designed, managed and produced performances, software projects, new genre art installations and new facility construction in ten countries from 1999-2015, initiated and contributes to many university research projects, and publishes regularly. In his creative work and research, Burke has incorporated technologies such as game engines, embedded sensing, and mobile handsets into multidisciplinary projects informed by historical and contemporary artistic practice. Most recently, he has focused on the underlying architectures that support such work, as application team lead for the NSF-funded Named Data Networking future internet architecture project, a multi-campus research program started in 2010.

Burke is currently the Assistant Dean for Technology and Innovation at the UCLA School of Theater, Film and Television (TFT), where his role is to develop and implement a strategy for advancing TFT as a global leader in interdisciplinary innovation at the intersection of new digital platforms, technology, visual storytelling, and performance.

He is also the Co-Founder and Executive Director of UCLA REMAP, the Center for Research in Engineering, Media and Performance, a joint program of TFT and the Henry Samueli School of Engineering and Applied Science. REMAP's core projects investigate the interrelationships among community, culture and technology and how emerging technology can support community development and cultural expression.

RECENT HIGHLIGHTS

Sponsored Research

Co-Principal Investigator and Application Lead, **Future Internet Architecture: Collaborative Research - Named Data Networking**, National Science Foundation, \$7.9M/3 yrs, PARC, UCLA, and 8 other campuses. (PI: L. Zhang, UCLA), 2010-2013. (Additional \$5M funding received through 2016.)

Principal Investigator, **Scripting the Holodeck**, Google Focused Award on Future Storytelling, \$525k directed gift over three years, 2014.

Book Chapter

J. Burke. "Emerging Applications of Wireless Sensing in Entertainment, Arts and Culture," Invited chapter in *The Art of Wireless Sensor Networks Volume 2: Advanced Topics and Applications*, Springer, 2014.

Artworks

Instructor and co-director. "Los Atlantis," an experimental production with J. Ed Araiza and TFT students incorporating immersive projection and online streaming, Spring 2015.

Instructor and co-director. "Gone with the Wind Remixed," an experimental production with Laura Karpman and TFT students incorporating immersive projection and dynamic sound, Spring 2012.

Workshop

TFT "Future Storytelling Summer Institute 2014." NantStudio, Culver City. Produced and directed an intensive two-week summer workshop for UCLA Theater, Film and Television graduate students exploring virtual production and motion capture in a hands-on multidisciplinary process.

BIOGRAPHICAL INFORMATION

Born March 12, 1977 in Fullerton, California USA.

EDUCATION

- 2010 **MFA, Film Television & Digital Media – Producing, University of California, Los Angeles**
Focus: Producing media for multiple platforms integrating location-based technology.
- 2001 **MS, Electrical Engineering, University of California, Los Angeles.**
Specialization: Signal Processing. Advisor: John Villasenor. Cumulative GPA: 3.9/4.0.
University Fellowship, 2000. Dean's funding, 2001.
Thesis: *Dynamic control of performance environments by online analysis of performer movement.*
- 1999 **BS, Electrical Engineering, Cum Laude, University of California, Los Angeles.**
Regents' Fellowship for four years. Dean's list Fall/Spring 1999. Cumulative GPA: 3.7/4.0.

ACADEMIC APPOINTMENTS AND AFFILIATIONS

- 2014- **Assistant Dean, Technology and Innovation – School of Theater, Film & Television, UCLA**
Newly created position to develop and implement a strategy for advancing the UCLA School of Theater, Film and Television (TFT) as a global leader in interdisciplinary innovation at the intersection of new digital platforms, technology, visual storytelling, and performance.
- 2009-2013 **Director, Technology Research Initiatives – School of Theater, Film & Television, UCLA**
Newly created position to develop and promote the strategic role of technology in the creative research and production of the UCLA School of Theater, Film and Television (TFT). Intended to provide vision, leadership and advocacy for technology research initiatives and programs crossing disciplines and departments. Specific responsibilities include: Propose and develop large research scale projects; conceive digital media program strategy; develop research infrastructure.
- 2005- **Founding Executive Director – Center for Research in Engineering, Media and Performance**
Research direction, development and administration of this joint Center created by the Henry Samueli School of Engineering and Applied Science and the School of Theater, Film and Television. Directly involved in the initiative to create the Center with Professors Fabian Wagmister and Bill Kaiser. Management of \$404k in research and operational funding in REMAP's first year, now over \$1M/year. Also worked to create external advisory council, initiate and follow up development meetings with all sections of industry..
<http://remap.ucla.edu/>
- 2005-12 **National Science Foundation Center for Embedded Networked Sensing at UCLA.**
2007-12 *Member, Research Executive Committee*
2006-12 *Area Lead, Urban Sensing*
2005-12 *Affiliated Faculty*
<http://cens.ucla.edu/>
- 2001-09 **Assistant Researcher – School of Theater, Film and Television, UCLA**
Professional research appointment with the HyperMedia Studio (now the Center for Research in Engineering, Media and Performance) exploring, through production and scholarship, the use of technology in the performance and media arts. Responsible for technical direction and coordination of research at the Studio, proposal development, and production. Two-step merit increase to Asst. Researcher III effective July, 2006.
<http://www.tft.ucla.edu/>
- 2003-06 **Lecturer – Department of Film, Television and Digital Media, UCLA**
2001-03 **Visiting Assistant Professor – Department of Film, Television and Digital Media, UCLA**
Instructor of FTV 144/244: *Interactive Authoring*, a course exploring interactivity on the computer screen and in installation spaces through lecture, discussion, and production, and FTV 411: *Multi-media Production*. Course development for classes parallel the electrical engineering systems design classes (EE190D).
<http://www.tft.ucla.edu/>
- 2000-2002 **Graduate Faculty, Industrial Design – Art Center College of Design, Pasadena**

Co-instructor of an interface design class exposing students to object-oriented programming and signal processing with Max/MSP, serial device control, sensor / computer interfaces, and the design and implementation of interactive physical environments. <http://artcenter.edu/>

1998-2001 **Workshop Instructor – California State Polytechnic University, Pomona**

At the Center for Education and Equity in Mathematics, Science and Technology, instructor of week-long workshops on beginning, intermediate, and advanced graphing calculator use for middle school, junior high, and high school mathematics teachers as part of the NSF-funded initiative *Teachers as Agents of Systemic Change*.

INTERNATIONAL APPOINTMENTS

2005-2012 **Faculty – Rhodopi International Theater Collective, Smolyan, Bulgaria**

Seminar and workshop instructor for college students in this month-long residency hosted by the Rhodopi Dramatischen Theater in Smolyan, Bulgaria in the center of the breathtaking Rhodopi Mountains- the mythological birthplace of Dionysus, Orpheus, and Eurydice, i.e., the origin of western theater, music, and performance. Created and operated by The Fourth World Laboratory for International Theater Research, New York. <http://www.rhodopi.org/>

2002- **Director, Technical Development – Centro Hipermediatico Experimental Latinoamericano**

Strategic planning of long-term technical development for this non-profit project in Buenos Aires, Argentina. cheLA is a regional project dedicated to the evolution of a vigorous and enduring technological art environment in Latin America; housed in a unique 5,000 sq. m. facility. <http://chela.org.ar/>

COURSES TAUGHT

2016 **Acting for Virtual Environments** (Winter 2016)

Developed and co-led this class with Theater faculty Jean-Louis Rodrigue and guest Ron Fischer. Focuses on synthesizing actor's gesture, action, and ultimately characterization into creating scene work for motion capture and virtual environments in collaboration with film and animation students envisioning and creating the environments.

2015 **Future Storytelling Studio** (Winter/Spring 2015)

Lead faculty (with Professor J. Ed Araiza, head of graduate acting) of this multidisciplinary studio class supported by Google to explore the intersection of text and code in the context of a multimedia production.

2014-2016 **Interpretive Digital Media Workshop** (3-quarter series in AY14, AY15)

Co-taught, with Prof. Fabian Wagmister, this studio/seminar course for the undergraduates in the Film, Television and Digital Media Department's interpretive digital media concentration.

2014 **UCLA TFT Future Storytelling Summer Institute** (July 2014)

Primary organizer and faculty of this two-week summer intensive program for MFA students in Film and Theater, exploring virtual production and motion capture.

2013-2014 **Location-Specific and Audience Aware Storytelling** (Fall 2013, Winter 2014)

This new two-quarter explores how to conceptualize, author, produce, and distribute next generation experiences that are location-based and/or audience-aware. The first iteration is known as the "Google Glass class", because students pitch, develop, and produce projects using Google Glass, with financial support from Google Research. Cross-listed in the Departments of Theater and Film, Television and Digital Media.

2013-2014 **Non-fiction Digital Media Seminar** (Fall 2013, Winter 2014)

Co-taught with Fabian Wagmister. Weekly seminar and discussions for students in the Department of Film, Television and Digital Media's pilot non-fiction digital media program.

2009-2013 **Digital Critical Essay** (Fall 2009, Winter 2011, Winter 2013)

- New course developed for the Moving Image Archive Studies graduate program at UCLA, to transition the program to providing an online thesis / portfolio option.
- 2012 **Named Data Networking Applications.** (Spring 2012)
Computer Science graduate seminar co-taught with Lixia Zhang on applications of the NDN future internet architecture.
- 2012 **Gone With the Wind Remixed.** (Winter/Spring 2012)
Two-quarter studio-style course collaboratively taught with composer Laura Karpman, as part of a TFT special initiative to create original multimedia performance works. Cross-listed in Theater and Film, Television and Digital Media.
- 2011 **Building Virtual Worlds.** (Fall 2011)
Designed and taught this new course cross-listed in Theater and Film, Television and Digital Media at UCLA, exploring the use of real-time 3D in design for live performance.
- 2010 **Site, Set, and Media: Puppeted Architecture.** (Fall 2010 - Winter 2011)
An original course series collaboratively created and taught with Profs. Dana Cuff and Jason Payne in the UCLA Dept. of Architecture and Urban Design, that explores the integration of concepts from puppetry and architecture to meet the challenge of integrating digital and physical set design. Supported by UCLA Arts Initiative.
- 2010 **Location-based Storytelling** (Fall 2010)
UCLA Dept. of Film, Television and Digital Media 298A. A course developed in collaboration with researchers from Nokia Research Hollywood to explore the theory and practice of location-based storytelling on mobile devices.
- 2010 **Non-linear Content Production Laboratory** (Spring 2010)
UCLA Dept. of Film, Television and Digital Media 298A. Sponsored by Nokia Research. Students in this course developed and produced prototype, original non-linear experiences for mobile tablet devices. Included principal photography at a variety of Los Angeles locations including the Bradbury Building, Griffith Park and Santa Monica Pier.
- 2010 **Participatory Sensing Seminar** (Spring 2010)
UCLA Dept. of Computer Science 219; co-taught—instructor of record, Deborah Estrin.
- 2009 **Engaged Media Production Workshop** (FTVDM 298A)
UCLA Dept. of Film, Television and Digital Media. Co-taught with Fabian Wagmister.
- 2008 **Production Practice in Theater, Film, Television and Digital Media** (Theater 172/472)
UCLA Dept. of Theater, studio course for *Homer in Cyberspace II*.
- 2008 **Graduate Technical Writing Seminar** (informal)
UCLA Center for Embedded Networked Sensing (graduate students and staff)
- 2002-05 (3 times) **Multimedia Production** (FTVDM 411), required for graduate directing students.
UCLA Dept. of Film, Television and Digital Media. Introduction to standard digital tools.
- 2001-05 (7 times) **Interactive Multimedia Authoring** (FTVDM 144/244)
UCLA Dept. of Film, Television and Digital Media. Course on the theory and practice of creating physically interactive environments by combining sensing and dynamic media.
- 2000-02 (4 times) **Interface Design** (with David Beaudry)
Art Center College of Design, Graduate Industrial Design Program. A course covering the concept and practical implementation (though programming) of physical computing.

ACADEMIC PROGRAM DEVELOPMENT

- 2013- **Interpretive Digital Media Undergraduate Concentration, UCLA FTVDM**
Collaborated with Vice Chair and Head of Production, Professor Fabian Wagmister, to design, coordinate, and teach in a new undergraduate concentration in the Department of Film, Television and Digital Media that brings together documentary/non-fiction production with digital media.

DEGREE COMMITTEES

- Ph.D. – Ilya Moiseenko (Computer Science), Katie Shilton (Information Science), Vids Samanta (CS), Huang Ming-Chun (CS), Cheng-Kang Hsieh (CS), Dustin O’Hara (IS).
- MFA – David Harris (Film, Television and Digital Media).

OTHER UNIVERSITY ACTIVITIES

- 2014-15 **Outreach representative, Middle East MFA Scholarship** – *School of Theater, Film and Television’s new Directing Scholarships for the MFA Degree Program in Directing/Production: "Giving Voice to the Unique Perspective of Arab Women."* At the request of the Dean of TFT, traveled to Doha, Qatar; Dubai, Al Ain, Sharjah, Abu Dhabi, U.A.E.; and Jeddah, Saudi Arabia to promote and recruit this new program. Member of the TFT team that developed outreach materials; prepared interim and final reports.
- 2015 **Sponsored Research Seminars for the School of Theater, Film and Television** – At the Dean’s direction, in collaboration with the UCLA Office of the Vice Chancellor for Research, organized three seminars on research funding for TFT faculty on staff, covering federal, foundation, and industry funding.
- 2012 **Member, UCLA Research Informatics Strategic Planning Committee** – *Libraries, Theater, Film Television, Arts & Architecture.* Nominated by the Office of the Vice Chancellor for Research.
- 2010-15 **Member, Engineering VI building committee**, Henry Samueli School of Engineering and Applied Science.
- 2010 **Co-Chair, Dean’s Special Task Force on Storytelling, Technology and Innovation**
Charged with developing a 3-5 year plan for a large-scale multidisciplinary center and related programs in the UCLA School of Theater, Film and Television.
- 2010 **Member, Joint Sub Task Force for Interdisciplinary Curriculum Re-imagination**
UCLA Dept. of Theater; UCLA Dept. of Film, Television and Digital Media
- 2009 **Advanced Gaming / Transformative Media Certificate Program**
Participant in UCLA campus planning committee.
- 2008 **Outside advisor to Architecture Design Studio, Superficial Superglow Version 2.0**
David Erdman, Casey Reas, Jeff Burke, Dana Cuff, Mark Hansen
UCLA Architecture and Urban Design; UCLA Dept. of Design | Media Arts

PROFESSIONAL PRACTICE

- 2002-2009 **Principal and Co-founder, w a kenningar associates, llc.**
Design and owner’s representation for construction of multimedia and performing arts facilities. Representative projects (as principal-in-charge):
- Pitzer College – Avery Auditorium**, Claremont, California (2007-2009)
Client: Levin & Associates Architects, Los Angeles
Scope: Theatrical and audio/visual systems design; program development

All phases of design through construction for 250+ seat multipurpose auditorium and lecture hall.

National Center for the Preservation of Democracy, Los Angeles, California (2003-06)

Client: Japanese American National Museum

Scope: Owner's representation for specialized systems (theatrical, audio/visual, IT and electrical)

Representation of the National Museum in the design and construction of a new multimedia performance and lecture space, as well as tenant improvements, in the federally-funded \$7.5M renovation and expansion of the museum's historic original building on East First Street, a national registered monument. Translated owner program goals to design guidelines for specialized systems, reviewed design documents, coordinated with the architect and construction manager to ensure project quality and cost controls across all trades, performed regular on-site field reviews, vetted change orders, coordinated with consultants and subcontractors, provided training and startup assistance through the project's opening events. Architect: Levin & Associates Architects. Construction Management: Orgel Construction Management. Contractor: Turner Construction.

Scripps College Dance Facility, Claremont, California (2003-06)

Client: Levin & Associates Architects, Los Angeles

Scope: Theatrical and audio/visual systems design; program development

Design of theatrical lighting and audio/visual systems, as well as development of functional requirements for all dance-related elements for the schematic design and design development phases of this 16,000 square foot project.

Scripps College Balch Auditorium Renovation, Claremont, California (2003-04)

Client: Drisko Studio Architects, Santa Monica

Scope: Theatrical and audio/visual systems design

Theatrical and audio-visual systems consulting for renovation of this historic auditorium on the Scripps College Campus. Schematic design through construction.

Alexandra Nechita Center for the Arts, Orange, California (2002-03)

Client: Lutheran High School Association of Orange County

Scope: Owner's representation and audio/visual systems design

Audio-visual systems design for \$4.5M 720-seat theater, including over \$1M of theatrical and audio/visual equipment. Owner's representation in design and construction of theatrical rigging, lighting, as well as stage configuration and cabling project. Architect: Architects Orange. Contractor: Thorpe Construction.

Invited presentations on this work

"How the heck did they do that?" (Panel) – Illuminating Engineers Society of Los Angeles, Marriot LAX, March 13, 2006.

2006 **Theatrical lighting design**

Triptych, Nomad Theatre Company, Los Angeles. (January-March 2006)

Location: Matrix Theater, West Hollywood.

"...first-rate lighting" – Los Angeles Times, 1/20/06

"...elegant, uncluttered ambiance" – Los Angeles Weekly, 1/18/06

AFFILIATIONS

2014- **Advisory Board (Non-profit)**, LA Makerspace

<http://www.lamakerspace.com/>

2013 **YouTube Certified**, Audience Development.

2013 **Google Glass Creative Collective**, affiliated faculty.

2011-14 **Advisory Board (Non-profit)**, Go Green Foundation

<http://gogreenfoundation.com/>

2011-2012 **Advisory Board (Non-profit)**, Open Media Cluster, Telematics Park of Rome

<http://www.openmediaccluster.com/>

2010- **Advisory Board (Non-profit)**, Meaningful Media

<http://meaningfulmedia.org/>

- 2007-2009 **Siqueiros Mural Subcommittee, El Pueblo de Los Angeles Historical Monument Authority, City of Los Angeles, Member.**
<http://www.latimes.com/entertainment/news/arts/la-et-culture18-2008oct18,0,2184718.story>
- 2007 **Science and Technology Advisory Board, San Jose Climate Clock project.**
<http://sj-climateclock.org/about>
- 2006- **ACM Computers in Entertainment (Journal), Editorial Board / Associate Editor.**
- 1999- **Eta Kappa Nu Electrical Engineering Honor Society, Lifetime Member.**

NEW MEDIA ARTWORKS AND PERFORMANCES

AS AUTHOR, DESIGNER OR CO-CREATOR

- 2016 **SEARCH FOR GLOBAL SONG** (*Concept, Story & Project Direction, Executive Producer*)
Creator and producer of this algorithmically evolving online film, which tells the story of three strangers from different generations, who live moments away from each other, coincidentally connected by people and places, unknowingly collaborate to create a new piece of music unique to their lives. Different versions of the piece are shot by different teams, uploaded and intercut automatically.

Website: <http://searchforglobalsong.com/author>
- 2016 **FLOW** (*Interactive interpretive system, Los Angeles, under development*)
Co-producer and lead technologist for the UCLA Interpretive Media Laboratory proposed interactive interpretive system for the LA State Historic Park's Welcome Pavilion, which will enable physically interactive exploration of the history, culture, and stories of Los Angeles.
- 2014-15 **Los Atlantis** (*Multimedia theatrical project, under development*)
Producer and supervising faculty for this cross-disciplinary production under development by students at TFT as part of the Google Future Storytelling project. This multi-site, online and mobile supported experimental multimedia theatrical piece tackled issues of human memory within the context of modern Los Angeles. All media for the piece was streamed into and out of YouTube using original software developed for the project, along with the first iteration of a web-based "active script" that controlled live and online aspects of the production.
- 2014- **Ambient Informatics - Ida/Dactyl** (*Westwood, Interactive Sculpture*)
Primary collaborator on interactive light sculpture with Jason Payne and Dana Cuff of UCLA Architecture and Urban Design. Installed in 2015 at the Weyburn Terrace Apartment Complex. This interactive light sculpture changes its lighting pattern based on real-time transit data from the Bruin Bus system.
- 2014- **Wellspring** (*Los Angeles, Interactive Sculpture*)
Producer and collaborator on interactive light and sound sculpture for REMAP's Interpretive Media Laboratory. Installed in September 2014 at the Los Angeles State Historic Park.

Opening Video: <https://vimeo.com/110848397>
- 2014-15 **LASHP Trails** (*Los Angeles, Mobile Website*)
Producer and technology director for mobile website created by REMAP's Interpretive Media Laboratory (IMLab), creating a publicly accessible urban trails system in Northeast Downtown with history, culture, and physical fitness activities available on everyday mobile devices. Supported by the California Endowment, the National Park Service, California State Parks, and the City of Los Angeles. First announced and demonstrated by the US Secretary of the Interior Sally Jewell and LA Mayor Eric Garcetti.

Website: <http://lashp-trails.org/>

Awards
California Trails and Greenways Conference "Social Media, Websites and Technology Award," 2015.

Selected press
Sam Hoff, "UCLA professor creates website to encourage exploration of downtown LA," Daily Bruin, Los Angeles, October 24, 2014.

Noela Hueso, "Mobile tool allows trail users to learn as they explore L.A. neighborhoods," UCLA Newsroom, Los Angeles, October 20, 2014.

Bianca Barragan, "Here's the New App that Annotates your Downtown-Area Hikes," Curbed Los Angeles, online, October 16, 2014.

Darren Hubert, "New app guides you through Northeast Los Angeles History," Urban Hillside, online, March 28, 2014.

Nuran Altair, "New mobile website encourages exploration of LA's urban trails," KPCC 89.3 FM website, Los Angeles, March 12, 2014.

Matthew Bramlett, "New app will school you on L.A.'s history while you hike around the city," LAist, online, March 12, 2014.

Alissa Walker, "Los Angeles to launch nation's largest interactive trail network," Gizmodo, online, March 11, 2014.

2014 ***Grace Plains (Alternate Reality Game)***

Executive producer and faculty for this student-generated project funded through a Google Faculty Research Award. Alternate reality game using Google Glass piloted at YouTube Space LA over a three-day public trial. The piece enables writer-administrators to guide public participants and actors through a role-playing story experience via Glass, which is streamed live to YouTube. Created by Cole Baker, Pierre Finn, and Phill Powers in collaboration with the Location-based and Audience Aware storytelling class, REMAP, the Google Glass team, and YouTube Space LA's engineering team.

Website: <http://graceplains.com/>

Selected press

Mike Fricano, "Students show how wearable technology could alter the idea of narrative," phy.org, online, June 11, 2014.

2014 ***Bodies for a Global Brain (Web Series)***

Executive producer and faculty for this student-generated project funded through a Google Faculty Research Award. Two episodes of this seven-part webseries were shot as part of the Location-based and Audience-Aware storytelling class. The pieces uses machine learning to select dialogue from Twitter for two actors wearing Glass to perform, within a scene-by-scene structure created by writer-director Eben Portnoy.

Trailer: <https://www.youtube.com/watch?v=1S-q9j4uqqo>

2014 ***An Adaptation of Macbeth (Multimedia theatrical project, under development)***

An Adaptation of Macbeth is a full-length original play that has arisen out of the Rhodopi International Theater Laboratory. It is a new work written by Jared J. Stein, which will be first directed by Peter Karapetkov, a Bulgarian director currently residing in Arlington, Virginia. Technology and media design will be by Jeff Burke of UCLA REMAP. The project represents a further step in this group's investigations of theatrical media and their place within the Cyber Age, in particular the fusion of digital and physical design and the integration of the performance with real-time data from the internet. Invited for production at the Plovdiv Dramatichen Theater, Bulgaria. Recipient of support from the Trust for Mutual Understanding.

2012 ***Samitaur Tower Media System (Media system, Culver City; Concept Design)***

UCLA REMAP team concept design proposal for a new media and projection system for Samitaur Constructs' "Art Tower" building in Culver City, by architect Eric Owen Moss. Submitted December 30, 2012. Developed proof-of-concept tests and initial production plan.

2012 ***Navilandia Al Sur (Civic action / technology system, Buenos Aires)***

Design of a Cultural Civic Computing system for the Navilandia community-based artwork at cheLA in Argentina, which engaged community groups in distributing thousands of Christmas ornaments, hand mapping their distribution, and subsequently transformed those mappings into an original web visualization of the intervention. Conducted in the Parque Patricios neighborhood of Buenos Aires. Project conceived and directed by Fabian Wagmister. Visual design by Eitan Mendelowitz. Co-developed the overall system, led technological development, and coded the image scanning and registration system using medical image registration techniques.

Site: <http://navilandia.org/>

Selected press

"El Barrio se lleña de arte," Revista N, Clarin, Buenos Aires, January 2, 2013.

- "Buenos Aires painting the town with Christmas ornaments," Pacific Standard Magazine, California, December 24, 2012.
- "Una Nochebuena Reciclada con Arte Civico y Colectivo," Clarin, Sociedad, Buenos Aires, December 24, 2012.
- "Una Navidad de Creatividad Colectiva," M2 Pagina 12, Buenos Aires, December 22, 2012.
- "Innovador Festejo Navideño: Navilandia al Sur," CN23 television, Buenos Aires, December 21, 2012.
- 2012 ***Gone with the Wind Remixed (Multimedia performance, UCLA)***
Collaborative, experimental production developed in collaboration with Emmy Award-winning composer Laura Karpman and TFT students, in the TFT Theater Laboratory Space. Scholar-driven exploration of the classic film, its social, historical and cultural context, and surrounding issues of race and gender. 5 digital projectors and dynamic sound. Staged in Spring 2012. Incorporated Touchdesigner real-time 3D programming language for projection, Max/MSP and Ableton Live for sound, wide-angle projectors, cameras, and sensors.
- Selected press*
- "Gone with the Wind Remixed," Daily Bruin, November 3, 2011.
- 2012 ***Untitled Dynamic Light Sculpture (USC)***
Light sculpture visualizing creative trade data for the Transmedia Conference, USC/UCLA, April 6, 2012. The sculpture visualizes creative labor and its relationship to GDP across the world: it has five intertwined strands of fifty lighting elements, each of which represents a country. They are arranged by GDP per capita, progressing from the so-called "global north" (Norway) to the "global south" (Ethiopia). The system fades through a decade of creative labor data from the UN for each country, for each of four categories, below described. Recycled material, led, software. The installation was commissioned by Transmedia 2012. Team: Alessandro Marianantoni, Alex Horn, Jeff Burke. Fabrication: Anne Herlihy, Yoshie Sakai.
- 2011 ***Memoria Barrial de la Parque Patricios (Installation, Buenos Aires)***
Co-author; prototype interactive installation, Buenos Aires Subte, Parque Patricios station. Creator: Fabian Wagmister. Gestures and body movement of subway riders enable interaction with local media content in an original 3D visualization built on the Unity 3D engine.
- Site: <http://www.memoriabarrial.chela.org.ar/>
- Selected press*
- "Instalan un Controlador de Juego en Parque Patricios," enelSubte.com, Buenos Aires, January 23, 2012.
- "El Subte Llego a Parque de Los Patricios," CAL, Buenos Aires Ciudad, Buenos Aires, October 4, 2011.
- 2010 ***Fearful Symmetries (Los Angeles; Media concept design only)***
Collaboration with Diavolo, a Los Angeles-based professional dance company to create an experimental, sensor-enabled interactive stage design for this dance piece set to John Adams' *Fearful Symmetries*. Incorporated design collaboration with cinematographer Vanessa Holtgrewe, architect Kaitlin Drisko, interactive designer David Beaudry.
- 2009-2013 ***Beacon - Community wellness data-driven light sculpture (Santa Monica, Interactive Sculpture)***
Public light sculpture commissioned by The UCLA Family Commons, a community-focused facility in Santa Monica, California of the UCLA Semel Institute Global Center for Children and Families. Day-to-day expressions of feelings about wellness in the community drive the lighting of the sculpture in real-time. Glass Lantern design by Jeff Burke and Kaitlin Drisko. Glass fabrication by Judson Studios. Graphic Design by Creable.
- 2009 ***Primer/Lem (Smolyan, Bulgaria, Multimedia puppet performance)***
Original collaborative theater project with Tom Lee (La Mama Experimental Theatre Club, New York), Jared Stein (The Fourth World Laboratory). This original workshop piece explored Lem's ideas of isolation and fragility, found in novels such as *Solaris* and *Return from the Stars*. Using Bunraku and Kuruma Ningyo-style puppetry, an original electronic score, and a landscape of projections (including live projected miniatures), the collaboration seeks to capture the essential humanity of Lem's text, not merely to adapt his stories to the stage. Supported by the Trust for Mutual Understanding.
- 2009 ***ludiCity (gallery 727, Los Angeles, Urban action / technology)***
Co-creator, with Fabian Wagmister, of this situationist inspired system using SMS and mapping technologies to generate playful, coordinated urban actions for gallery727's *Photocartographies* exhibit in Downtown Los Angeles.
- Site: <http://la.remap.ucla.edu/ludicity>

- 2009 ***Three Modern Noh Plays (UCLA, Multimedia theatrical performance)***
 Projection design with Vanessa Holtgrewe for three plays by Yukio Mishima—*Yuya*, *Dojoji*, and *Yorobashi*—directed and translated to English for the first time by Conor Hanratty. Performed at UCLA, May, 2009. Used original software developed by REMAP using the Ogre real-time 3D engine.
- 2009 ***Remapping LA: Hollywould (LACE; Hollywood Blvd., Mobile experience)***
 Community-authored media tours of Hollywood Boulevard on gps-enabled handheld devices, and a 3D visualization of the media database. Co-Directed with Fabian Wagmister. Created for the LA Freewaves 11th Festival of Experimental Media Arts, this project incorporated geotagged, keyworded images, audio, and video from community groups around the Boulevard into a prototype system that enabled experience of the media on handheld devices while walking on the Boulevard and in a 3D game engine at several locations. Co-developed media concept, coordinated software development team, and programmed several key software components.
 Website: <http://la.remap.ucla.edu/hollywould/>
- 2008 ***Mobile HiFi (Filipino Workers' Center, Mobile experience)***
 In collaboration with Public Matters Group, the Filipino Workers Center and UCLA Hypercities, this REMAP project developed a second-generation mobile location-based media experience revealing the history of Historic Filipinotown, using media developed by high school students in the "PDUB" program.
 Website: <http://la.remap.ucla.edu/hollywould/>
- 2008 ***The Virgin & The Unicorn (Smolyan, Bulgaria, Multimedia theatrical performance)***
 Theater workshop production based on Leonardo Da Vinci's version of the classic myth. Media designer, with Vanessa Holtgrewe, for this original piece being created and produced in collaboration with dramaturge Sergio Costola of Southwestern University, director Alexandar Iliev of the Bulgarian National Academy of Theater and Film Arts, and Jared Stein of The Fourth World Laboratory for International Theater Research. The piece will incorporate research and a performance text by Costola, movement styles from carnival performance through commedia by Iliev, and be rehearsed and performed at Fourth World's 2008 Rhodopi International Theater Collective. Performed in August 2008.
- 2008 ***Homer in Cyberspace II (UCLA, Multimedia theatrical performance)***
 Theater production, UCLA's musical sequel to *The Blogger Project* (below) that explores the story of Homer's Odyssey amidst a modern tension between technology and the emotional soul. Media designer for this piece directed by Mel Shapiro, which received a UCLA Arts Initiative Grant to support the media production components. Building on techniques developed in past works, the piece will employ a 3D graphics engine to fuse video, still photography, hand drawings, and virtual architecture into projections integrated with physical scenery. Currently developing the visual and systems approach to the piece and forming the team of professional and student animators, cinematographers, programmers, and theater designers. Nine performances in May-June 2008.
 Press
 Suzy Evans. "Play takes musical 'Odyssey' into cyberspace", *Daily Bruin*, May 29, 2008.
 David Chute. "Futuristic technology breathes new life into ancient heroes", *UCLA Today*, May 20, 2008.
- 2008 ***The Reader (pre-production concept)***
 Theater production based on Chris Dolan's adaptation of Bernhard Schlink's bestselling novel on the difficult lifelong relationship of a Jewish man and his much older lover, a woman who he discovers was an SS officer, an allegory for Germany's struggle in the mid-20th century to come to terms with the second world war. Production and media designer, with Vanessa Holtgrewe, of the American premiere directed by Jean-Louis Rodrigue with support from the Montalvo Arts Center. The production design concept for the show, developed with Rodrigue and scenic designer Kaitlin Drisko, includes a gentle use of projection to mix the fantastic worlds of the books read by the two lovers with their stark and lonely real surroundings. Workshop / performance dates pending.
 Media concept video: <http://remap.ucla.edu/reader/concept/>
- 2007 ***Junction / Juncture (Los Angeles State Historic Park, Interactive public mural)***
 Outdoor interactive media installation exploring overlapping threads of Southern California's history at the Los Angeles State Historic Park in Downtown. The piece was directed by Fabian Wagmister as a module of *Remapping LA*. Acted as producer, technical director, and lead software developer for this first collaboration among California State Parks, UCLA REMAP, and Walt Disney Imagineering R&D. Conceived and programmed

C++ software that dynamically assembled a navigable three-dimensional timeline of historical images, audio, video, and text, drawing from a keyworded database of media created by Wagmister and REMAP. The software-generated imagery was projected into the Park on a 60-foot, 4-projector system constructed by WDI and dynamically controlled its operation to respond visually to live sensor information on train, traffic, and river movement near the park. It also accepted SMS text messages of thematic keywords from visitors to enable them to contribute to the selection of media presented. Coordinated and integrated the work of four other software developers on sensing, graphics, SMS, and audio. Acted as the primary cross-institutional contact for physical production, including coordination with LA Metro.

Website: <http://la.remap.ucla.edu/juncture>

Gallery: <http://la.remap.ucla.edu/juncture/visual/>

Video: http://remap.ucla.edu/remappingla/juncture/juncture_480.mov

2006

The Blogger Project (UCLA, Multimedia theatrical performance)

Theater production interweaving elements from Homer's Iliad, the Iraq War, and internet-based communication within a game-like world onstage. Media designer, software developer, and systems designer for this experimental project with Tony-award winning director and Professor Mel Shapiro in UCLA's Department of Theater. Developed a projection technique using the *Unreal* game engine to create projected visuals that mixed video, classical imagery, and modern web content. Coordinated the six-person team at REMAP, including computer science, architecture, film & television, and theater students to develop the software, systems, and visual design. Programmed specialized C++/DirectX code for full resolution video playback in the game engine. Co-designed and co-directed the video segments.

Articles

Lindsay Brandon Hunter, "Virtual space, theatrical space: video games and the postdramatic performer", *Performance Studies International* 13, November 8-11, 2007, New York.

Press

Hugh Hart. "Live action blogs", *Los Angeles Times*, April 18, 2006.

2003-05

in silico v1.0: Ecce Homology (Fowler Museum of Cultural History; SIGGRAPH 2005, Installation)

Immersive interactive visualization of genomics data based on Chinese calligraphy. Co-Author and primary collaborator with Ruth West, Cheryl Kerfeld, Eitan Mendelowitz and others to develop an this piece, with its integral animation of the important BLAST (Basic Local Alignment Search Tool) algorithm used in gene sequence matching. Conceptual design, coordination of physical installation and software coding in Perl, C, and Java to map genetic data (GenBank) to visualization parameters. Designed the piece's five projector, four computer system to create a high resolution projection over 40 feet wide. Also wrote funded proposal to Intel to fund this research (see below). The project also received hardware support from NEC Visual Systems and is documented in the *Leonardo* journal.

Website: <http://insilicov1.org/>

Exhibitions

SIGGRAPH 2005 – Emerging Technologies and Art Gallery, Los Angeles, July 2005.

Hacking the timeline, EZTV & Crazy Space. Video only, Santa Monica, December 2004.

Fowler Museum of Cultural History and the Hammer Museum, Los Angeles, October-January, 2003.

Residencies for development

Sixth College of Art and Technology, University of California San Diego. Spring 2005.

Co-Production, Banff Centre for the Arts, Canada. March, 2005. (Awarded, but declined.)

Press

"Blending the human genome with art", *C|Net News*, July 27, 2005.

"A Scientific Masterpiece." *UCLA Undergraduate Science Journal*, 17:26-28

"Tracing out a scientific discovery," *Daily Bruin*, November, 2003.

"Genomic Pictograms," *Genomic News Network*, November 26, 2003.

2000-02

hamletmachine (Boston; Los Angeles, Installation)

Interactive sound installation based on Heiner Müller's well-known play, a deconstruction of Shakespeare and German history. Conceived and created this interactive audio installation that shattered a recording of Müller's dialogue into sixteen pieces. In a harshly lit room, the audio fragments play back simultaneously and

continuously, but in silence until shadows cast by visitor-performers fall on small sensors that raise or lower each dialogue fragment's volume based on the depth of the shadow. Through manipulation of their shadows, the visitor-performers reveal the whole play all at once, a fragment at a time, or any variation in between. Featured original dialogue recording by Adam Shive and Meg Ferrell. Programmed in Max/MSP. Invited to document in the journal *Müller in America* (see below). The version in Boston was updated with projected text fragments that created shadows when no one was in the room, allowing the space (and play) to talk to itself.

Exhibitions

Museums & the Web, Boston, Massachusetts (2002)

Fusion 2000, Los Angeles, California (2000)

2000-02 ***Beloved Mnemosyne (Multiple venues, Installation)***

Interactive sound and sculpture environment on memory and loss in a family whose father has Alzheimer's. Co-Author with Anne Deane Berman (Iowa State based composer) and Bill McVicar (Santa Barbara based sculptor). Co-developed the concept and designed the software and use of ultrasonic person tracking and capacitive sensing to subtly activate a room-sized installation space. Visitors encountered smoothly overlaid sounds and stories of the family designed by Deane Berman as they moved through it and neared or touched sculptural objects and water features by McVicar.

Exhibitions

Konstmuseum, Göteborg, Sweden – International Computer Music Festival (2002)

Tech Museum of Innovation, San Jose – GroundZero Launch (2001)

MB5 2000, Oakland (2001)

Mentions

Hinkle-Turner, Elizabeth. "**Continued Promise for the Future**", *Women Composers And Music Technology in the United States: Crossing the Line*, Ashgate Publishing, 2006.

2000 ***Riddles of the Sphinx (Cambridge, UK, Installation)***

Video installation exploring the materiality of digital compression and analog film, based on Peter Wollen's 1977 film of the same name. Co-Author with Peter Wollen and Kevin Fisher. Developed the visual approach and programmed a JPEG-inspired compression / quantization scheme for full-frame moving images for this video piece.

Exhibitions

no1se: A series of exhibitions about information and transformation, Kettle's Yard, Whipple Museum of the History of Science, Cambridge University, 2000.

NEW MEDIA ARTWORKS AND PERFORMANCES

AS SYSTEMS DESIGNER

2015 ***Engage L.A. – Interpretive Digital Media concentration project grants and exhibition***

Designed the technological system used by IDM undergraduates, supervised its implementation, deployment, testing, and software creation. This incorporated immersive projection, multi-imager motion tracking with OpenPTrack, and an HTML5/Javascript /CSS development environment for the students.

2010 ***Out the Window (Los Angeles, Media system on the LA Metro)***

Out the Window was a MacArthur Digital Media & Learning award-winning project to bring youth-created digital video to the 4000 screens of the LA Metro bus system. The project was a collaboration between LA Freewaves, UCLA REMAP, the Echo Park Film Center, and Public Matters Group. Burke designed the digital media processing and assembly systems that generated daily "bundles" of media automatically based on conceptual affinity between video shorts, and the text messaging system that enabled feedback from the bus riders to the creators.

Sample Press

"**Out the Window' Brings Art to L.A. Buses,**" Catherine Wagley, LA Weekly, June 2, 2011.

Hear in the City, KPFK Radio, June 7, 2011.

"**Out the Window: Rolling Out Innovative Digital Learning on LA's Metro System,**" Humanities, Arts, Science and Technology Advanced Collaboratory, Online, June 1, 2011.

"**Park Talk, Water Work, and Bust Art: Have a GOOD LA Weekend,**" Good.is, June 9, 2011.

- 2006 ***Imageability (Los Angeles, Media system)***
 Interactive installation and participatory mapping tool. Creator: Fabian Wagmister. Part artwork and part tool for community investigation of the city, collective remembering, self representation, imagining alternative futures, and engaged dialogue, *Imageability* uses a pen sketch-based interface to explore a large database of media about Los Angeles created by Wagmister. Designed the system, programmed the multiuser database code in Java, and coordinated development by others, including lead interaction developer, Eitan Mendelowitz.
- Exhibitions*
Monumento:872 Event, Chiparaki Cultural Civic Computing Center (June 15, 2007)
Chiparaki Cultural Center, Downtown Los Angeles as part of the LA State Historic Park opening. (2006)
- 2001 ***Invocation and Interference (Belfort, France, Installation)***
 Interactive media environment exploring two modes of very intimate communication colliding as one travels the immense distances of the Pampas region in Argentina. Creator: Fabian Wagmister. Designed and programmed a user-configurable multi-sensor multi-screen control system for this installation, that integrated video playback to six monitors, real-time video zoom equipment, and ultrasonic proximity sensors. This enabled each video kiosk to respond to individuals walking near them, zooming into the video or switching from video stream to video stream based on their movement relative to the kiosk.
- Exhibitions*
Festival d'Arts Multimedia Urbains, Belfort, France (2001)
- 2001 ***Macbett (UCLA, Multimedia theatrical performance)***
 Theater production of Ionesco's satirical take on Shakespeare, at UCLA. Director: Adam Shive. Conceived and developed systems allowing performers playing supernatural characters to control by their own movement and position, stage lighting and sound for this mainstage theater production at UCLA. Participated in the production design and rehearsal process to assist with the integration of these systems into the performance. Programmed critical multithreaded system software in C++ and coordinated five undergraduate programmers working in C++, Java, and Visual Basic. Co-wrote UC Digital Media Innovations grant to fund this work and wrote several publications. (See below.)
- Press*
"Merging technology and theater," *UCLA Today*, May 8, 2001. (Macbett)
- 2000 ***Fahrenheit 451 (UCLA, Multimedia theatrical performance)***
 Theater production of Ray Bradbury's science fiction classic, at UCLA. Directors: Marc Fellner & Kathy Castoro. Produced by DJ Gugenheim. Designed video systems and directed a team of three programmers for the UCLA student theatrical production. Live and prerecorded video on three rear-projection screens could be selected and played from single computer at full resolution and speed. In effect, three screens of full-resolution video could be "edited" on the fly to match by an operator to match the actors' performances.
- Press*
"Courage under fire," *Daily Bruin*, May 3, 2000.
- 1999-2000 ***Behind the Bars (Nicaragua; Panama, Installation)***
 Confrontational interactive installation treating Latin America's history of physical and intellectual oppression created by Fabian Wagmister. Integrated sensor and video systems to create a space responsive to and remembering the trajectory of individuals through it. Coded in Visual Basic and Java, and created a system of touch-sensitive prison bars, light sensors, live cameras, and recorded video.
- Exhibitions*
Central American Film and Video Festival, Granada, Nicaragua, 1999.
Semana de Identidad (Art Festival), Panama, 2000.
- Press*
"Viaje al Corazon de la Maquina, La Voz Del Interior, Cultura", Cordoba, Argentina, Sep. 21, 2000.
"Con Identidad Propia," *La Prensa*, Panama, June 24, 2000.
- 1999 ***Throughput (UCLA, Installation)***
 Interactive installation challenging the relationship between onscreen subject and viewer, created by film critical studies PhD student Kevin Fisher. To achieve the effect of an onscreen real archer following and firing at

viewers in the space, integrated performer tracking sensor systems with video and still image control in Macromedia Director for this experimental interactive media space.

Exhibitions

UCLA Department of Film and Television, Los Angeles, 1999.

1999

Time & Time Again... (Duisburg, Germany, Installation)

Interactive installation exploring the intersections of technological dependency and cultural identity in the Ruhr region of Germany. Creators: Fabian Wagmister and Lynn Hershman. Developed the sensing system, programmed Macromedia Director, and performed other technical production work for this distributed interactive media environment.

Commission & exhibition

Wilhelm Lehmbruck Museum, Duisburg, Germany, 1999.

Press

"**Connected Cities: Kunstprozesse im urbanen Netz**", Ruhr Online, Germany, July 16, 1999.

"**Rezension**", Verena Kuni, Hagen, Germany, 1999

"**Connected Cities: Ein Kunstnetzwerk**", 1000 Feuer, Essen, Germany, March, 1999.

"**Städte im Zeitalter ihrer virtuellen Konstruktion**", Foyer Spezial, Germany, January, 1999.

FILM & VIDEO

J. Burke (Producer), "**Named Data Networking Video FAQ.**" Collection of video interviews show in Paris and San Diego. Available on UCLA REMAP's Vimeo channel. 2014-2015

J. Burke (Director / Co-Writer / Executive Producer), "**Recoding Innovation: Free Software / Free Culture,**" 20 minutes HD short film on the connection between the Free Software and Free Culture movements. June 2013.

Selected for the *Nordic Creative Commons Film Festival*, 2013, August 30 – September 8, 2013.

J. Burke (Director / Co-Writer / Executive Producer), "**Recoding Innovation: Genomics,**" 17 minutes HD educational film on the generative role of ethics in genomics and the Genetic Information Non-discrimination Act. June 2013.

J. Burke (Executive Producer/Writer), E. Meyers (Producer/Writer), Kern Konwiser (Director/Writer), D. Estrin, J. Goldman, M. Hansen, K. Shilton. "**Participatory Urban Sensing**", 5 minute HD documentary style video produced by Eyes of the World Productions for the Center for Embedded Networked Sensing. May 2008. <http://youtube.com/watch?v=t-ltfpA3XiY>

J. Burke (Producer/Editor), V. Holtgrewe (Director of Photography). "**Rhodopi International Theater Collective**", 2007, digital video, 7:17. Documentary-style short on the RITC based on 60 hours of footage shot in 2005, created to promote the Collective and the creation of a full-length documentary on it.

LARGE-SCALE ACADEMIC RESEARCH PROGRAMS

2014- **Named Data Networking Consortium** (REMAP / Computer Science)
Consortium lead and point of contact.

The consortium consists of eight founding university members including UCLA, paying (\$25k/yr) industry members **Alcatel-Lucent, Brocade, Cisco Systems, Fujitsu Laboratories of America, Huawei Technologies, Intel Corporation, Juniper Networks, Panasonic Corporation, and Verisign**, as well as nine additional international universities and non-profits. Burke was responsible for developing the membership agreement with UCLA OIP-ISR, and coordinating the involvement of many of the members.

Press (selected)

Bob Brown, "**IP was Middle School, Named Data Networking is College,**" Network World, October 8, 2015.

Bob Brown, "UCLA, Cisco and more join forces to replace TCP/IP" Network World, September 4, 2014. (Quoted)

2013- **OpenPTrack** (REMAP / Open Perception)
Project director.

Initiated and lead the OpenPTrack open source person tracking project, which is now used in several UCLA projects and beyond. This project is being collaboratively developed by UCLA REMAP and the silicon valley-based non-profit Open Perception, in collaboration with UCLA GSEIS, Indiana University, Electroland, and other partners. It is an open source project that provides scalable, multi-camera person tracking, enabling many people to be tracked over large areas in real time using off-the-shelf consumer sensors and Linux computers. It is designed for applications in education, arts, and culture, as a starting point for exploring group interaction with digital environments. <http://openptrack.org>.

2010- **Named Data Networking** (REMAP / Computer Science)

8-campus NSF Future Internet Architecture Program; Co-PI, Management team.

The NDN project is one of five National Science Foundation Future Internet Architecture programs, and aims to create and evaluate a new internet architecture that uses data names for routing rather than host addresses, providing benefits for applications, use of in-network storage, and including intrinsic security building blocks. Burke is the application team lead, driving development and testing of NDN apps for such application environments as video streaming, the Internet of Things, real-time conferencing, and mobile health. Lead PI: Lixia Zhang (UCLA). Architect: Van Jacobson (Google/UCLA). Custom networking architecture and implementation; C, C++, Python, Javascript, Java development. Variety of hardware platforms, including workstations, embedded devices, cloud instances.

Site: <http://named-data.net>

Press (selected)

Vernasco, Lucy. "The Mission To Save The Internet By Rewiring It From The Name Up," Motherboard (vice.com), May 1, 2015. (Quoted)

Stacey Higginbotham, "Check out the 3 next-gen internet networks that raised \$15M from the NSF," May 13, 2014.

Stacey Higginbotham, "Reinventing the internet: How do we build a better network?," May 7, 2014.

"Content is King: Can Researchers Design an Information-Centric Internet?" Scientific American, December 13, 2012.

"Your Gadgets are Slowly Breaking the Internet." MIT Technology Review January 9, 2013.

2007-2009 **Personal Environmental Impact Report** (Center for Embedded Networked Sensing)

PI group: Jeff Burke, Deborah Estrin, Mark Hansen, Ruth West (equal responsibility)

Mobile phone and internet server based system to provide personalized environmental impact and exposure reports based on people's travel patterns as sensed by location-enabled mobile phones. (Produced and contracted interactive exhibit.) A nationwide pilot is now under development by Nokia Research Center Palo Alto, in collaboration with UCLA CENS, as well as a pilot with the GoGreen Foundation of San Francisco, supported by Nokia and ATT Mobile.

Exhibition video: http://remap.ucla.edu/jburke/misc/nextfest/nextfest_half.mov

Video interview: http://www.wirednextfest.com/inform/2008/video_gallery_p2.php

Exhibition

IIT TechFest 2009, Bombay.

Wired Magazine NextFest, Millenium Park, Chicago, September, 2008.

Press (selected)

Ryan Kim. "Phones help youths see impact of carbon." San Francisco Chronicle, April 6, 2009.

Colleen Edwards. "SF Students Carbon Footprint." The Real Story, KCBS (radio). April 6, 2009.

Alyssa Dangelis. "Wide Angle: All the Cool Kids Have Them." Discovery Channel Tech Blog, March 27, 2009.

"Students 'Go Green' in San Francisco." All Things Considered, National Public Radio, March 16, 2009.

Ryan Singel. "App Turns GPS Phone Data Into Green Report Card," Wired Science, September 29, 2008. <http://blog.wired.com/wiredscience/2008/09/app-turns-gps-p.html>

Michael Graham Richard. "Green at WIRED NextFest: GPS-Based Personal Environmental Impact Report (PEIR)," Treehugger.com, October 1, 2008. <http://www.treehugger.com/files/2008/10/wired-nextfest-2008-chicago-peir.php>

See below for support.

2006- **Interpretive Media Laboratory | Remapping LA (REMAP / TFT)**

Co-created and supervise this innovative civic cultural computing project that explores how emerging technologies can be designed and used in collaboration with communities to explore their history and identity. The project is led by Fabian Wagmister, UCLA Dept. of Film & Television and in collaboration with the California Department of Parks, and Recreation and several community organizations. Supported by the UCLA Center for Community Partnerships.

Website: <http://imlab.ucla.edu>

Selected Press

See <http://imlab.ucla.edu/information/media-coverage/> for press coverage in 2014-2015, including mention on NBC 4 Los Angeles, Television; Los Angeles Downtown News; KABC-7 Television; Gizmodo, and other venues.

Earlier press includes:

"UCLA's Virtual Pioneers: Remapping Los Angeles", Directions Magazine, May 10, 2007.

"UCLA's Virtual Pioneers: Remapping Los Angeles", UCLA in LA website

"UCLA In Downtown LA: UCLA Joins Downtown Los Angeles Park Project", UCLA Govt Relations

"Remapping: from cell phones to collective consciousness", UCLA Today, February 6, 2007.

Andra Lim, "High School Students Create Environmental Billboards with Cell Phone Pictures," LA Weekly, Los Angeles, April 20, 2012.

Eddie Kim, "Cornfield Park to Close for Year-Long Renovation," Los Angeles Downtown News, Los Angeles, March 26, 2014.

(See additional press for individual projects in the previous section.)

2006-11 **Participatory Sensing (NSF Center for Embedded Networked Sensing)**

Area lead. Co-created and supervise this newest of five systems research areas at CENS, an NSF Science & Technology Center. Researchers focus on how ubiquitous, off-the-shelf mobile technology can be harness to investigate and address significant challenges in public health, urban planning, and sustainability. The area involves over six graduate students, four staff, six undergraduates, and four regularly collaborating faculty. With Deborah Estrin (Computer Science). Funded by a variety of sources listed below.

Website: <http://urban.cens.ucla.edu/>

Press

Steve Lohr, "Smart Dust? Not quite but we're getting there," New York Times, January 30, 2010.

Rachel Rettner, "Cell phones allow everyone to be a scientist," livescience, June 4, 2009.

"Researchers' Enviro Sensors Hitch Rides on Street Sweepers", Wired Science Blog, June 11, 2008.

2002-04 **The Iliad Project (HyperMedia Studio)**

Co-architect. Performance research project exploring the broad implications of digital technology to theater performance with simultaneous development of text, technology, and design. Collaboration with playwright Jared Stein and UCLA Theater, Film and Television faculty Fabian Wagmister, Edit Villareal, and Jose Luis Valenzuela. Initial development with MFA directing student Adam Shive. Co-wrote internal / external proposals to fund this research (see below). Java coding.

Press

"The Play's the (New) Thing," *UCLA Alumni Magazine*, May, 2002.

"An Iliad for the 21st century," *Wired News*, January 2, 2002.

2001-6 **kolo and nebesko (Hypermedia Studio)**

Concept, architecture, programming coordination, coding. Direction of ongoing development of an Open Source, Java-based middleware and scripting language to support device interconnection and networking for technological-based artworks. Supervision of four graduate and undergraduate software developers. Lead architect and current maintainer is Computer Science doctoral student Eitan Mendelowitz.

1998-03 **Advanced Technology for Cinematography / MediaWINS**

Co-Principal Investigator. Multidisciplinary research effort including Professors Mani Srivastava, William Kaiser, Greg Pottie (Electrical Engineering), William McDonald and Fabian Wagmister (Film, Television and Digital Media). The project investigated and build the technologies for an on-set network that senses, reports, and records the conditions of film production.

RESEARCH SUPPORT AND SPONSORED RESEARCH PROJECTS

- 2015 **Yosemite Slough Interpretive Research Project**
(California State Parks Foundation, \$42k, 1 yr)
Co-PI with Fabian Wagmister.
- 2015 **Supplement to NSF STEP for OpenPTrack development**
(National Science Foundation, \$135k, 1 yr)
Co-PI with Noel Enyedy. Supplement funds people tracking work initiated and led by Burke.
- 2015 **Trail City LA support**
(California Endowment, \$30k)
Co-led with Fabian Wagmister. This project supports the extension of the successful LASHP Trails mobile application to other locations in Los Angeles.
- 2015 **Trail City LA support**
(National Park Service, \$10k)
Co-led with Fabian Wagmister.
- 2015 **Supplement to IMLab Interagency agreement**
(California State Parks, \$24k, 1 yr)
Co-led with Fabian Wagmister. Continued support for REMAP's work at the Los Angeles State Historic Park.
- 2014-15 **Engage L.A. – Social Impact Storytelling**
(TFT Skoll Center for Social Impact Entertainment, \$75k)
Co-PI with Fabian Wagmister. Grant to support social impact projects emerging from the UCLA FTVDM Interpretive Digital Media concentration.
- 2014 **Named Data Networking as Enabling Architecture for the Internet of Things: Pilot Research**
(Huawei, \$86.5k, one year)
Principal Investigator for UCLA. With Lixia Zhang. Proposal in progress to explore the role of NDN in supporting the Internet of Things.
- 2014 **Scripting the Holodeck**
(Google Focused Research Award – Future Storytelling, \$525k, three years)
Principal Investigator for UCLA. Unrestricted gift to support research on the future of the script explored through a combination of collaborative production and cross-disciplinary research.
- 2014 **NDN Community Meeting September 2014**
(NSF, \$29k, event funding)
Principal Investigator for UCLA. Support for first NDN Community Meeting.
- 2014 **EAGER: Collaborative Research: Smart Home Networking via NDN**
(NSF, \$225k, one year)
Co-Principal Investigator for UCLA. Collaboration with University of Arizona.
- 2014 **NeTS: From Intentional to Enacted Values in a Future Internet Architecture**
(NSF, \$500k, three years)
Principal Investigator for UCLA. Collaboration with University of Maryland, College Park. Continuation of Values-in-Design research for the NDN project.
- 2014 **Named Data Networking Next Phase**
(NSF, \$5M, two year)

Co-Principal Investigator and Application Team Lead. Continuation of the Named Data Networking future internet architecture research project. Applications in this phase include building automation and monitoring; mobile participatory sensing; and real-time conference and multimedia. <http://named-data.net/>

- 2014 **NDNoT: Named Data Network of Things**
(Qualcomm Research, \$51k, one year)
Principal Investigator. Project to explore NDN advantages and challenges in support of “network of things” home environments.
- 2013 **Engaging Content-driven Application Creators with the NDN Future Internet Architecture**
(Comcast, \$70k, one year)
Principal Investigator. Project to develop tools and provide support for the open source community to build innovative content-centric applications using the NDN future internet architecture.
- 2013 **DIP: Science Through Technology Enhanced Play (STEP)**
(NSF Cyberlearning, \$1.1M, three years)
Co-PI. PI: Noel Enyedy, Graduate School of Education and Information Studies. Project to create physical interactive educational environments that focus on the role of play in learning. Burke’s role is to lead the creation of the body sensing systems by REMAP and collaborate on their integration into the learning environment.
- 2013 **Supplement: Named Data Networking.**
(NSF, \$600k, six months)
Co-PI / Application Team Lead. Supplement and time extension for the Named Data Networking Research Program.
- 2013 **Refraction: Storytelling with Google Glass.**
(Google Faculty Award, \$60k, one year)
Principal Investigator. Support for the location-based and audience aware course described above.
- 2013 **WebRTC over Named Data Networking.**
(Cisco, \$98k, one year)
Principal Investigator. Project to develop an approach to real-time conferencing using the NDN Future Internet Architecture, starting from the Mozilla WebRTC codebase.
- 2013 **Workshop performance of The Adaptation of Macbeth.**
(Trust for Mutual Understanding, \$11k, one year)
Principal Investigator. Support to develop a Los Angeles-based workshop of the Macbeth theatrical project started at the Rhodopi International Theater Collective.
- 2013 **Interpretive Media Laboratory at the Los Angeles State Historic Park**
(California State Parks, \$150k)
Co-Principal Investigator. Ongoing support for the research project described above.
- 2012 **EAGER: Cyberlearning at the Los Angeles State Historic Park – Civic Engagement and Collective Authorship**
(NSF, \$300k, one year)
Principal Investigator. In collaboration with the non-profit CityLife and students from Lincoln High School, this research project developed a web-based authoring system for physically interactive “digital murals” that continues to be used at the UCLA Lab School. It pilots a “folksonomy-based authoring” approach in which the participants’ own conceptual categories for their media are used as the basis for interaction authoring. Funded by the NSF award “EAGER: Cyberlearning at the Los Angeles State Historic Park – Civic Engagement and Collective Authorship.” Co-PIs: Noel Enyedy, Graduate School of Education and Information Studies; Fabian Wagmister, Department of Film, Television and Digital Media.

Press

“Cybermural combines art and science for interactive education”, Daily Bruin, Los Angeles, CA, April 9, 2014.

Referenced

Gravell, J. (2015). Defining Community through Cybermural Art. Accepted to Graduate Student Roundtables of College and University Faculty Assembly of the National Council on Social Studies. New Orleans, LA.

Gravell, J. (2015). Defining Community: Cybermural Cybermapping: Civic Art in High School. Accepted on Ethnocomputing and Collaboration: Pedagogy and Research panel. Council on Anthropology in Education at the American Anthropology Association Annual Meeting. Denver, CO.

- 2012 **EAGER: Bridging the Gap Between Application Architecture and Network Architecture in Cyberphysical Systems via Named Data Networking**
(NSF, \$300k, one year)
Principal Investigator. Co-PI: Lixia Zhang, UCLA Computer Science. This project explored the benefits and challenges of the NDN Future Internet Architecture in supporting cyberphysical systems, including the practical deployment of industry-standard building monitoring systems for UCLA's TV Studio #1.
- 2012 **Interpretive Media Laboratory Summer Program for High School Students**
(CENS, Approx. \$65k)
Principal Investigator and co-organizer with UCLA faculty Fabian Wagmister and the Public Matters Group. The program is described in more detail below.
- 2012 **Ambient Informatics**
(UCLA Vice Chancellor for Research Seed Grant, \$25k)
Co-PI. Collaboration with Dana Cuff, Jason Payne, Deborah Estrin, Christine Outram.
- 2012 **Ambient Informatics**
(UCLA Arts Initiative, \$12.5k)
Co-PI. Collaboration with Dana Cuff, Jason Payne, Deborah Estrin, Christine Outram. Project to develop an ambient informatics installation on the UCLA campus. To be completed in 2014.
- 2011 **International Research Program in Storytelling and Technology**
(Ministry of Youth Policy, Republic of Italy, approx. €120k)
Co-PI. Support for international research and exchange program in multidisciplinary research and production.
- 2011 **Supplement to NSF FIA - Values in the Design of the Named Data Networking Architecture**
(UCLA/UMD, approx. \$171k)
Co-PI. Supplemental support to NDN project for collaboration with University of Maryland on Values in Design aspects of named data networking.
- 2011 **Industry outreach funding**
(UCLA, approx. \$10k)
Requestor. Support from the UCLA Office of the Vice Chancellor for Research to develop outreach programs for digital media research in the UCLA School of Theater, Film and Television.
- 2010 **Remapping LA, Phase 2**
(California State Parks, \$63k)
Co-Principal Investigator.
- 2010 **Future Internet Architecture: Collaborative Research - Named Data Networking**
(NSF, \$7.9M, 3 yrs)
Application Lead / Co-Principal Investigator. Institutional leads: UCLA and PARC. Approx. Funding to applications group at UCLA: \$1M. <http://named-data.net>
- 2010 **Courage and Creativity: The Innovation of Ethics in Science & Engineering**
(NSF, \$283k, 2 yrs)
Principal Investigator. Support for research and development of new media documentary production exploring the generative role of ethics in science and engineering. Outcomes listed under films and video above.
- 2010 **Out the Window: About/In/By Los Angeles**
(MacArthur Digital Media and Learning Competition, \$100k)

- Co-Principal Investigator. Best in Class: Youth Partners. This collaborative project with LA Freewaves, the Echo Park Film Center, and Public Matters, brought youth video content to the 4000 screens of the LA Metro bus system. Burke acted as the technical lead for the digital system that automatically assembled and distributed video "bundles" to the bus system, and received/forwarded text message responses from riders.
- 2010 ***Non-linear, location-based content laboratory***
(Nokia Research Hollywood, \$50k)
Principal Investigator. Support for the course of the same name listed above.
- 2010 ***Remapping LA***
(California State Parks, \$50k)
Co-Principal Investigator. Ongoing support for this research program, described above.
- 2009 ***Data-driven light sculpture***
(UCLA Semel Institute, \$30k)
Principal Investigator. (See 'Beacon' in new media projects above.)
- 2009 ***Visual Campaignr: Mobile Software for Participatory Sensing & Cultural Civic Computing***
(Nokia Research Hollywood, \$120k)
Principal Investigator.
- 2009 ***OurPixel***
(Microsoft Jim Gray Seed Grant, \$30k)
Co-Principal Investigator with Eric Graham, Nithya Ramanthan, Deborah Estrin. Pilot program to examine the intersection of web-based GIS with community-based participatory research.
- 2009 ***Integrating Augmented Reality with Location-Based Experience on the Maemo Platform***
(Nokia Research Hollywood, \$25k)
Principal Investigator. Followup grant.
- 2008-9 ***Seeding an open-source ecosystem for location-based mobile experience***
(Nokia Research Hollywood, \$25k)
Principal Investigator. One of the first cycle of seed grants issued by Nokia's new Hollywood-based, entertainment-focused research center.
- 2008-11 ***Ethics Education for Participatory Urban Sensing***
(National Science Foundation, \$300k)
Co-Principal Investigator, with Deborah Estrin (PI, Computer Science), Mark Hansen (Stat), Jim Waldo (Sun), graduate student researcher Katie Shilton (Information Studies).
- 2008-9 ***Personal Environmental Impact Report*** (renewal and NextFest production funding)
(Nokia, \$320k)
Co-Principal Investigator, with Deborah Estrin (PI, Computer Science), Mark Hansen (Stat). See above for project description.
- 2008 ***Production of Egghér at the 2008 Rhodopi International Theater Collective.***
(Trust for Mutual Understanding, \$35k)
Principal Investigator. Third year of funding for collaborative residency for digital media artists at this alternative summer training program in Eastern Europe.
- 2008 ***Participatory Privacy Regulation for Urban Sensing***
(Intel, approx. \$30k in cash and equipment)
Principal Investigator.
- 2008 ***Research support***
(Draper Foundation, approx. \$210k)
To the School of Theater, Film and Television. Unrestricted Gift.
- 2008 ***Participatory Sensing on Everyday Mobile Phones to Support Active Living***
(Samsung, approx. \$143k)
Principal Investigator. Co-PIs: Deborah Estrin (Computer Science), Mani Srivastava (Electrical Engineering).

- 2008 ***A Web Framework for Participatory Urban Sensing***
(Google, \$45k)
Co-Principal Investigator, with Deborah Estrin (PI, Computer Science), Mark Hansen (Statistics).
- 2007 ***Architecture for a data-centric network fabric (matching funds)***
(UC Microelectronics Innovation & Computer Research Opportunities, \$77k)
Co-Principal Investigator, with Deborah Estrin (PI, Computer Science). Matching funds for the 2007 Cisco and Nokia awards listed below.
- 2007-8 ***Production grant for Homer In CyberSpace II***
(UCLA Arts Initiative, \$60k)
Subgrant Principal Investigator. PI: Bill Ward, Chair, Dept. of Theater. \$42k subgrant to fund REMAP media design components of this production, described above.
- 2007-9 ***Semiotic Pivots and Activity Spaces for Elementary Science (SPASES)***
(National Science Foundation, \$300k)
Senior Personnel, with Noel Enyedy (PI, Education), Fabian Wagmister (Co-PI, Film & Television).
- 2007 ***Personal Environmental Impact Report***
(Nokia, \$220k)
Co-Principal Investigator, with Deborah Estrin (PI, Computer Science), Mark Hansen (Stat), Andrew Mondchein (Institute for Transportation Studies).
- 2007 ***HyperMedia Los Angeles***
(UCLA Arts Forum, \$18k)
Co-Principal Investigator, with Todd Presner (PI, Germanic Languages), Diane Favro (Architecture). Extension of Hypermedia Berlin (<http://berlin.ucla.edu>) to Los Angeles and other cities.
- 2007 ***Superficial Superglow***
(UCLA Arts Forum, approx. \$10k)
Co-Principal Investigator, with David Erdman (PI, Architecture), Dana Cuff (Architecture), Casey Reas (Design | Media Arts), Mark Hansen (Statistics). Multidisciplinary design studio incorporating architecture, media, and sensing.
- 2006 ***Participatory Sensing:SensorPlanet as a Platform for Community Data Gathering.*** (Nokia, approx. \$375k in-kind, \$30k cash)
Co-Principal Investigator, with Deborah Estrin (PI, Computer Science), Mark Hansen (Statistics), Mani Srivastava (Electrical Engineering). Joint equipment support to Center for Embedded Network Sensing (CENS) and REMAP.
- 2006 ***Architecture for a data-centric network fabric to support urban participatory sensing.*** (Cisco, approx. \$430k)
Principal investigator. Graduate student and equipment support for collaborative research at REMAP and the Center for Networked Embedded Sensing, with Prof. Deborah Estrin in the Department of Computer Science.
- 2006 ***SensorPlanet equipment support.*** (Nokia, approx. \$20k)
Co-Principal Investigator. Negotiated equipment support for collaborative research via the Center for Networked Embedded Sensing, with Prof. Deborah Estrin in the Department of Computer Science.
- 2006 ***NeTS-FIND: Collaborative Research: Network Fabric for Personal, Social, and Urban Sensing Applications.*** (National Science Foundation, \$1.1M/4 yrs).
Co-Principal Investigator. PI: Mani Srivastava, Electrical Engineering, UCLA. Collaborating institution: UC Berkeley International Computer Science Institute.
- 2006 ***Cultural Experiences for Urban Public Space Using Cooperative Embedded and Mobile Sensing.*** (National University of Singapore, approx. \$55k)
Principal Investigator. Seed funding to develop major proposal to the National Research Foundation of Singapore with the collaborative partnership of UCLA, National University of Singapore and Walt Disney Imagineering.

- 2006 **Advanced digital editing equipment.** (Draper Foundation, \$45k)
Principal investigator.
- 2006 **Workshop in media, performance and technology at the 2006 Rhodopi International Theater Collective.** (Trust for Mutual Understanding, \$25k)
Principal Investigator. Renewal for a four-week residency for digital media artists at this alternative summer training program in Eastern Europe, to create an original theatrical work in collaboration with the local theater, the Rhodopi Dramatichen, one of the most productive regional theaters in the Balkans.
- 2005 **Equipping the Center for Research in Engineering, Media and Performance** (Intel, \$24k)
Principal Investigator. Proposal for computer equipment in support of REMAP.
- 2005-2006 **Sensor network data visualization.** (Center for Embedded Networked Sensing, \$35k)
Co-Principal Investigator. Collaboration with Professor Mark Hansen (Statistics, Design|Media Arts) to explore new visualization techniques for sensor data.
- 2005 **Workshop in media, performance and technology at the 2005 Rhodopi International Theater Collective.** (Trust for Mutual Understanding, \$40k)
Principal Investigator. Creation of a three-week residency for digital media artists at this new alternative summer training program in Eastern Europe.
- 2003-2006 **Sensor networks for feature film production.** (Intel Research Council, \$240k)
Principal Investigator. As part of the Advanced Technology for Cinematography initiative at UCLA, this project investigates the application of emerging embedded sensing platforms to feature film cinematography.

Plautz, Dana. "A look at Intel's Research Council Funding in Sensor Networks for Feature Film Production and Interactive Drama." *ACM Computers in Entertainment* 2(4), 2004.
- 2003-2006 **Authoring software for instrumented media-rich spaces.** (NEA, \$100k)
Co-Principal Investigator. (PI: Fabian Wagmister.) Conceptual development, proposal writing, programming, and coordination for this project, partially supported by the National Endowment for the Arts, to develop prototype software to support instrumented media-rich spaces, including a test environment being developed in collaboration with the Smithsonian National Museum of American History. Wrote funded NEA grant proposal to support this research (see below).
- 2003 **Visualization of the BLAST bioinformatics algorithm and human genome.** (Intel, \$28k)
Principal Investigator. Equipment grant for the *in silico* art and research project (see above).
- 2002 **The Iliad – Exploring HCI in the Performing Arts.** (NSF, \$100k)
Proposal author and primary researcher. (Co-PIs: Fabian Wagmister and Michael Dyer.) NSF Small Grant for Exploratory Research supporting *Kolo* software development for The Iliad Project. (see above).
- 2002-3 **Design visualization for theater, film and television.** (UCLA Academic Tech. Svcs., \$29k)
Principal Investigator. Supervised graduate and undergraduate students to develop prototype 3D modeling tools to support theater, film and television pre-production visualization.
- 2002 **The Iliad Project.** (University of California Institute for Research in the Arts, \$5k)
Co-Principal Investigator. Demonstration project grant, support for The Iliad Project (see above.)
- 2002-03 **Computer vision for media and performing arts.** (UCLA Academic Tech. Svcs, \$5k)
Principal Investigator. Three-quarter exploratory project in applications of computer vision to the arts.
- 2000 **Advanced technologies for live performance.** (University of California, \$13k)
Co-Principal investigator. (PI: Fabian Wagmister.) Digital Media Innovations Program Opportunity Grant in support of *Macbett*.
- 2000 **Pinpoint Local Positioning System** (\$60k)
Negotiated donation of specialized technology to the HyperMedia Studio for research.
- 2000 **MediaWINS** (GTE/Verizon Grant)
Lead researcher. (PIs: William Kaiser, Fabian Wagmister.) Negotiated donation of specialized technology to the HyperMedia Studio for research. Coordinated technical prototype development using wireless ethernet on

Windows CE handheld devices for a proposed application of wireless sensor network technology to film, television, and new media production.

RESEARCH ADMINISTRATION

- 2015 **TFT Dean's Vision Fund Review Committee** Coordinator (\$30k) – School of Theater, Film and Television. Developed and coordinated review process for this new faculty award.
- 2012-13 **International Research Program in Storytelling and Technology** (Government of Italy, €120k) Research and curriculum program with the Republic of Italy, created by UCLA REMAP Researcher Alessandro Marianantoni. This program included a national competition in Italy for participants who joined REMAP in artistic and training residencies: 5 students for 4 months; 20 students for 1 month.
- 2005-06 **Quartieri della Memoria / Responsive Public Spaces** (Provincia di Rieti, \$45k) Public space installation project designed and executed by UCLA REMAP researcher Alessandro Marianantoni. Website: <http://www.alexrieti.com/works/qdm/qdm.htm>

CONFERENCE AND EVENT ORGANIZATION

- 2016 **Technical Program Committee (TPC) Co-Chair, ACM Information-Centric Networking 2016**
Kyoto, Japan. September 2016.
- 2015 **Event Co-Chair, NDNComm Second Annual NDN Community Meeting.**
Los Angeles, CA. September 2015.
- 2014 **Event Co-Chair, NDNComm First Annual NDN Community Meeting.**
Los Angeles, CA. September 2014.
- 2014 **Organizer, TFT Future Storytelling Summer Institute 2014**
Los Angeles, CA. July 17 – August 1, 2014.
- 2013-14 **Organizer, UCLA School of Theater, Film and Television, Digital Summit 1 & 2.**
Los Angeles, CA, November 2013. (Internal to TFT.) Organized this day-long summit on the intersection of storytelling and technology for faculty and guests, on behalf of the School of Theater, Film and Television.
- 2013 **Organizer, UCLA REMAP Integrated Media Workshop.**
Buenos Aires, Argentina, March 25-April 5, 2013. Organized a series of workshops for 8 staff and students at the CheLA center in Argentina, on design for aerial performance with *Cuerda*, REMAP's *Cybermural* project, and experiments related to the Macbeth performance project.
- 2012 **Co-Organizer, Interpretive Media Laboratory Summer High School Program 2012.**
Los Angeles, CA, June-August 2012. Organized this four-week joint program with NSF CENS and REMAP for 16 high school students to learn and employ media authoring, data gathering, and analysis tools in order to document and explore the changing urban environment around the LA State Historic Park. Developed and executed by the Public Matters Group and REMAP.
- 2012 **Organizer, REMAP/RITL Workshop on Digital Media, Theatre, and Design.**
Formello, Italy, June-July 2012. Produced and directed an intensive two-week summer workshop in Formello, Italy exploring advanced technology in live performance, with 14 students and 8 instructors from Europe, Asia, and the United States, in collaboration with Jared Stein and Peter Karapetkov of the Rhodopi International Theatre Laboratory. Hosted by the Municipality of Formello, Rome. Culminated in a public workshop performance. Technologies included Touchdesigner real-time 3D engine, Max/MSP and Ableton audio software, wireless inertial sensors, electronic textiles. digital projection, and a variety of related technologies.
- 2011 **Physical Computing in Science** (planned)
Executive Program Committee and speaker, Institute for Computing in Science / Argonne & Los Alamos National Laboratories. July 16-23, Park City, Utah.
- 2008 **UCLA / Nokia Summit on Sustainability and Mobile Technology.**
Co-organizer, with D. Estrin, P. Boda, M. Hansen, H. Tirri. Finland, August 2008.
- 2008 **UCLA / Nokia Brainstorming Session on the Future of Mobile Entertainment.**

- Organizer. Full day session with 35 professionals and academics to develop themes and connections for a new Nokia R&D Laboratory in Hollywood. The Hollywood Roosevelt Hotel, May 15, 2008.
- 2007 **Participatory Urban Sensing & Community-Based Participatory Research**
Workshop chair with D. Estrin and graduate students S. Reddy, N. Ramanathan. *ACM Sensys 2007*. University of New South Wales, November 2007. Over 30 participants from engineering and the social sciences.
- 2007 **Joint workshop with Nokia Research Center Palo Alto on the Personal Environmental Impact Report.**
Co-organizer, with D. Estrin, P. Boda, H. Tirri, M. Hansen, and others. Nokia Palo Alto Research Center. July 31, 2007.
- 2007 **Monumento:872**
Co-organizer (technology). Event to unearth and engage Los Angeles in the night using mobile devices, GPS tracking, and media databases. Los Angeles, California. REMAP, in collaboration with UCLA Design|Media Arts, Center for Embedded Networked Sensing. June 2007.
- 2007 **BC/Vancouver-Canada-California Participatory Sensing Roundtable**
Organizing board of this industry, government, and academic meeting. Co-sponsored by REMAP and the Center for Embedded Networked Sensing and other partners. Wosk Center, SFU, Vancouver, British Columbia. March 22-23, 2007.
- 2006 **UCLA Urban Sensing Summit**
Organizer. Co-sponsored by REMAP and the Center for Embedded Networked Sensing. Bradley International Center, UCLA, May 4, 2006. Initiated a now vibrant area of research at UCLA. Over 40 participants from across campus, industry, and other institutions.
- 2005- **EXP Lecture Series**
Joint organization of this lecture series co-sponsored by REMAP and the Experiential Technology Center. Speakers from MIT, IBM, Disney, Intel, University of Illinois, LA County Natural History Museum, UCLA, UCI.

SYNERGISTIC ACTIVITIES

- 2014 **MFA Program / Scholarship Recruiting, Gulf States**
Represented the School of Theater, Film and Television in informational and recruiting trips to Saudi Arabia, Qatar, and the United Arab Emirates, on behalf of the new MFA Graduate-Level Directing Scholarships to "give voice to the unique perspective of Arab women."
- 2013- **Open PTrack**
Led the creation of the OpenPTrack project, a collaboration with the non-profit Open Perception, design firm Electroland, UCLA REMAP and Smith College to create an open source, multi-camera person tracking system for arts and culture applications, to meet a need of many REMAP applications.
Site: <http://openptrack.org/>
- 2010 **Sponsored research seminars**
Organized a series of seminars attended by Theater, Film and Television faculty and staff in 2010, which included speakers from the Office of the Vice Chancellor for Research, Contract and Grants Administration, Corporate and Foundation Research Relations, Huron Consulting, and others. These seminars were designed to encourage faculty to engage with government and industry sponsored research opportunities.
- 2010 **Mailroom Fund Startup Competition**
Organized and executed a media and technology startup competition with the UCLA Office of Intellectual Property Administration and the Mailroom Fund, a California-based venture capital firm that provided cash prizes and mentorship support to participating students.
- 2009 **Mailroom Fund Startup Competition**
Organized and executed a media and technology startup competition with the UCLA Office of Intellectual Property Administration and the Mailroom Fund, a California-based venture capital firm that provided cash prizes and mentorship support to participating students.

- 2007- **REMAP research internship programs with the National University of Singapore and the Beijing Multimedia Industry Association**
Initiated and coordinated new 4-6 month internships of six graduate and undergraduate students from Singapore and China .
- 2007-10 **UCLA Frontier Opportunities in Computing for Underrepresented Students**
Participant in UCLA's \$598k, 3-year effort funded by the NSF Broadening Participation in Computing program, with plans to provide lab engagements, seminars, workshops, etc.
- 2006 **Consulting – Costa Rican Ministry of Culture**
Consultant with Fabian Wagmister on a \$4M+ historic site renovation and community, culture and technology project.
- 2004-12 **Mentorship – Center for Excellence in Engineering and Diversity**
A mentor for project teams in the Introduction to Engineering (Engineering 87) course in the UCLA Henry Samueli School of Engineering and Applied Science.
- 2002- **Co-PI for a variety of multidisciplinary NSF grant proposals**
A participant as well as lead writer and organizer for interdisciplinary proposals including co-PIs from the UCLA Graduate School of Education & Integrative Studies, Computer Science, and Electrical Engineering. Additional collaborators included the NASA-funded Institute for Cell-Mimetic Space Exploration, as well as local schools including the Culver City Academy for the Visual and Performing Arts and the New Roads High School in Santa Monica, California.
- Representative example*
NSF IGERT Pre-Proposal - *Collaborative Program in Embedded Networked Systems and Expressive Communication*. F. Wagmister (Film), W. Kaiser (EE), M. B. Srivastava (EE), J. Burke (TFT), A. Alwan (EE), M. Hansen (Stats), W. McDonald (Film), S. Soatto (CS), V. Sobchack (Film), B. Vaughn (Disney), W. Ward (Theater); \$3M/5 yrs
- 2002 **Integrated course projects at Art Center and UCLA**
While also an instructor at Art Center College of Design, helped to structure and evaluate joint final 'interactive' projects created by graduate students in Industrial Design at Art Center with undergraduate sound designers in the UCLA Department of Theater.
- 2001- **Production consultation – Department of Theater**
Have provided regular assistance to motivated students in developing and implementing multimedia production systems for a variety of experimental theater performances, including an original production of Ray Bradbury's *Fahrenheit 451*, undergraduate and graduate thesis productions and installations.

RESIDENCIES

- 2010 **Rhodopi International Theater Laboratory. Smolyan, Bulgaria.**
Artistic residency for the development of Macbeth/Macbett, two weeks. Funded by the Trust for Mutual Understanding; in collaboration with FourthWorld Theatre Projects.
- 2009 **Rhodopi International Theater Laboratory. Smolyan, Bulgaria.**
Artistic residency for the development of PRIMER/LEM, two weeks. Funded by the Trust for Mutual Understanding; in collaboration with FourthWorld Theatre Projects.
- 2009 **Sarofim School of Fine Arts, Southwestern University. Austin, Texas.**
Residency at Southwestern to lead a workshop on the use of media in performance and assist the Theater Department develop a media-rich production concept for an original opera on the relationship between W. Kandinsky, A. Schoenberg, and G. Münter, *Color of Dissonance*. In collaboration with FourthWorld Theatre Projects. January, 2009; March, 2009. Funded by the Mellon Foundation. Student video designer won 2009 Austin Critics Table award.
- 2008 **Center for HyperMedia Experimentation (cheLA), Buenos Aires, Argentina**
Two-week funded residency continuing collaboration started in 2003 with local and international artists, educators, and students. December, 2008.

- 2008 **Rhodopi International Theater Collective / Rhodopi Dramatischen Theater.** Smolyan, Bulgaria.
Led four-week summer residency of four artists and technologies at the Rhodopi International Theater Collective (www.worldtheater.org) to create an original multimedia theatrical work with the student ensemble of the Collective. Funded by The Trust for Mutual Understanding. (See above for production details)
- 2007 **Academy of Theater and Film Arts.** Zagreb, Croatia.
One-week invited residency at the University of Zagreb's Academy of Theater and Film Arts, including classes and demonstration presentations with undergraduates.
- 2006 **Rhodopi International Theater Collective / Rhodopi Dramatischen Theater.** Smolyan, Bulgaria.
Led four-week summer residency of four artists at the Rhodopi International Theater Collective (www.worldtheater.org) to create an original multimedia theatrical work with the local professional company, the Rhodopi Dramatischen Theater. Funded by The Trust for Mutual Understanding.
- 2005 **Co-Production, Banff Centre for the Arts, Canada.** (awarded but declined)
Residency to develop *in silico* (see above).
- 2005 **Sixth College of Art and Technology,** University of California, San Diego
One-quarter residency to develop *in silico* (see above).
- 2003 **Center for HyperMedia Experimentation (cheLA),** Buenos Aires, Argentina
Two-week funded residency at this facility before it opened to the public in April, 2003 to introduce participating artists to interactive technology and production techniques, as well as construct with them a public demonstration of systems developed at UCLA and installed for use at the project.

BOOK CHAPTERS

- J. Burke. "Emerging Applications of Wireless Sensing in Entertainment, Arts and Culture," Invited chapter in *The Art of Wireless Sensor Networks Volume 2: Advanced Topics and Applications*, Springer, 2014.
- J. Burke and J. Stein. "Theatre of Context: Digital technology's impact on dramatic literature." In *New Visions of Performance: The Impact of Digital Technology*, Colin Beardon and Gavin Carver, eds. Swets & Zeitlinger: 2004.

JOURNAL PUBLICATIONS

- P. Gusev, Z. Wang, J. Burke, L. Zhang, E. Muramoto, R. Ohnishi, Y. Yakahiro, "Real-time Streaming Data Delivery over Named Data Networking," (Invited Paper) *IEICE Transactions*, to be published, 2016.
- T. Yoneda, R. Ohnishi, E. Muramoto, J. Burke. "Consumer-driven Adaptive Rate Control for Real-time Video Streaming in Named Data Networking," *IEICE Trans. Fundamentals Commun. Electron. Inf. & Systems*. (Submitted for publication, 2015.)
- J. Kang, K. Shilton, D. Estrin, J. Burke, M. Hansen, "Self-Surveillance Privacy" *Iowa Law Review*, vol. 97, p809, 2012.
- L. Arab, D. Estrin, D. H. Kim, J. Burke, J. Goldman, "Feasibility testing of an automated image-capture method to aid dietary recall," *Eur. J. Clinical Nutrition*, 65(10):1156-1162, October 2011.
- J. Burke (guest editor), *Performance and the City* special issue, *International Journal of Art and Technology*, September 2009.
- V. Samanta, C. Knowles, J. Burke, F. Wagmister, D. Estrin, "Metropolitan Wi-Fi Research Network in the Communities of the Los Angeles State Historic Park," *Journal of Community Informatics*, Field Note, Vol. 4 No. 1 (2008) Special Issue: Wireless Networking for Communities, Citizens and the Public Interest.
- T. Abdelzaher, Y. Anokawa, P. Boda, J. Burke, D. Estrin, L. Guibas, A. Kansal, S. Madden, J. Reich. "Mobiscopes for Human Spaces," *IEEE Pervasive Computing* 6(2):20-29, 2007.

H. Park, J. Friedman, P. Gutierrez, V. Samanta, J. Burke, M. Srivastava. "Illumimote: High Fidelity and Multi-Modal Light Sensor Module for Wireless Sensor Networks." *IEEE Sensors* 7(7):996-1003, 2007.

J. Burke, J. Friedman, E. Mendelowitz, H. Park, M. B. Srivastava. "Embedding expression: Pervasive computing architecture for art and entertainment." *Journal of Pervasive and Mobile Computing* 2(1):1-36, 2006.

R. West, J. Burke, C. Kerfeld, E. Mendelowitz, T. Holton, JP Lewis, E. Drucker, W. Yan, "Both and Neither: in silico v.1.0, Ecce Homology" *Leonardo Journal of Art, Science and Technology* 38:4(286-293), MIT Press, 2005.

J. Burke. "shadows of hamletmachine," *Muller in America*, Castillo Theatre, New York. Spring, 2003.

J. Burke. "Interactive performance environments and the visualization of actor movement." *Digital Creativity, special issue on Visual Interaction and Design*. 13(2):122-128, 2002.

J. Burke. "Dynamic performance spaces for theatre production," *Theatre Design & Technology*, Winter 2002.

CONFERENCE PAPERS, REPORTS

M. Dahn, Lee, C., Enyedy, N., Gravell, J., Burke, J., Illum, R., Avetisian, H., Paul, L., Gomez, T., & Torres, R. **The Cybermural Project: Digital Learning for Early Childhood Science Inquiry**. American Educational Research Association Annual Meeting. Washington, D.C., April 2016.

A. Bannis, J. Burke. **Creating A Secure, Integrated Home Network of Things with Named Data Networking**. NDN Technical Report NDN-0035, November 19, 2015.

A. Afanasyev, Y. Yu, L. Zhang, J. Burke, kc claffy, J. Polterock. **The Second Named Data Networking Community Meeting (NDNcomm)**, ACM SIGCOMM Computer Communication Review (CCR), November 2015.

P. Gusev and J. Burke. **NDN-RTC: Real-time videoconferencing over Named Data Networking**. Second ACM Conf on Information Centric Networking, September, 2015.

P. Gusev and J. Burke. **NDN-RTC: Real-time videoconferencing over Named Data Networking**. NDN Technical Report NDN-0033, July 2, 2015.

kc claffy, J. Polterock, A. Afanasyev, J. Burke, L. Zhang. **The First Named Data Networking Community Meeting (NDNcomm)**, ACM SIGCOMM Computer Communication Review (CCR), April 2015.

M. Munaro, A. Horn, R. Illum, J. Burke and R. B. Rusu. **OpenPTrack: People Tracking for Heterogeneous Networks of Color-Depth Cameras**. In *IAS-13 Workshop Proceedings: 1st Intl. Workshop on 3D Robot Perception with Point Cloud Library*, pp. 235-247, Padova, Italy, 2014.

J. Thompson and J. Burke. **NDN Common Client Libraries**, NDN Technical Report NDN-0024, September 5, 2014.

N. Enyedy, Burke, J., Wagmister, F., Bolling, A. and Fitz-Gibbon, T. **Cybermural: Becoming artist activists and learning urban planning**. In Enyedy (Chair) *Learning and Becoming Through Art-Making: Relationships among tools, phenomena, people, and communities in shaping youth identity development*, Symposium presented at the International Conference of the Learning Sciences, Boulder, CO., June 2014.

K. Shilton, J. Burke, C. Duan, k. claffy, L. Zhang. **A World on NDN: Affordances & Implications of the Named Data Networking Future Internet Architecture**, NDN Technical Report NDN-0019, April 11, 2014.

W. Shang, Q. Ding, A. Marianantoni, J. Burke, L. Zhang. **Securing Building Management Systems Using Named Data Networking**. *IEEE Network Magazine*, 28.3 (2014): 50-56.

- A. Afanasyev, J. Burke, V. Jacobson, L. Zhang, k. claffy, L. Wang, B. Zhang. **Named Data Networking**. (Invited Paper.) *ACM SIGCOMM Computer Communications Review*, in submission.
- D. Kulinski, J. Burke, and L. Zhang, **Video streaming over Named Data Networking**, *IEEE Multimedia Communications Technical Committee E-Letter*, July 2013.
- J. Lindblom, M.-C. Huang, J. Burke. and L. Zhang, **FileSync/NDN: Peer-to-Peer File Sync over Named Data Networking**, NDN Technical Report NDN-0012, March, 2013.
- W. Shang, J. Thompson, M. Cherkaoui, J. Burke and L. Zhang, **NDN.JS: A Javascript Client Library for Named Data Networking**. *INFOCOMM NOMEN 2013 Workshop*.
- J. Burke, P. Gasti, N. Nathan, G. Tsudik, **Securing Instrumented Environments over Content-Centric Networking: the Case of Lighting Control**. *INFOCOMM NOMEN 2013 Workshop*.
- J. Burke, A. Horn, and A. Marianantoni, **Authenticated Lighting Control Using Named Data Networking**, NDN Technical Report NDN-0011, October, 2012.
- Z. Qu and J. Burke, **Egal Car: A Peer-to-Peer Car Racing Game Synchronized Over Named Data Networking**, NDN Technical Report NDN-0010, October, 2012.
- D. Kulinski and J. Burke, **NDN Video: Live and Prerecorded Streaming over NDN**, NDN Technical Report NDN-0007, September, 2012.
- Z. Zhu, P. Gasti, Y. Lu, J. Burke, V. Jacobson, L. Zhang, **A New Approach to Securing Audio Conference Tools**, Asia Workshop on Future Internet Technologies, November 2011.
- J. Burke. "**Authoring Place-based Experiences with an Internet of Things: Tussles of Expressive, Operational, and Participatory Goals**," *IETF 80 Internet of Things Workshop*, March 2011, Prague. Invited for presentation.
- J. Kang, K. Shilton, D. Estrin, J. Burke, M. Hansen, "**Self-Surveillance Privacy**" *UCLA School of Law Research Paper* No. 11-01, December 21, 2010.
- The NDN project team, **Named Data Networking (NDN) Project**, NDN Technical Report NDN-0001, October 2010.
- M. Mun, S. Hao, N. Mishra, K. Shilton, J. Burke, D. Estrin, M. Hansen, R. Govindan, "**Personal Data Vaults: A Locus of Control for Personal Data Streams**." *ACM CoNEXT 2010*, November 30 – December 3 2010, Philadelphia.
- S. Reddy, M. Mun, J. Burke, D. Estrin, M. Hansen, M. Srivastava. "**Using mobile phones to determine transportation modes**." *ACM Transactions on Sensor Networks (TOSN)*, 6(2), 13, 2010.
- Heemin Park, Jeff Burke and Mani B. Srivastava. "**Intelligent Lighting Control using Wireless Sensor Networks for Media Production**," *KSII Transactions on Internet and Information Systems* 3(5):423-443, 2009.
- K. Shilton, J. Burke, D. Estrin, M. Hansen, J. Kang, R. Govindan. "**Designing the Personal Data Stream: Enabling Participatory Privacy in Mobile Personal Sensing**." 37th Research Conference on Communication, Information, and Internet Policy (Telecommunications Policy Research Conference). September 25-27, 2009. Arlington, Virginia.
- M. Mun, S. Reddy, K. Shilton, N. Yau, P. Boda, J. Burke, D. Estrin, M. Hansen, E. Howard, R. West. "**PEIR, the Personal Environmental Impact Report, as a Platform for Participatory Sensing Systems Research**." Seventh Annual Intl. Conf. on Mobile Systems, Applications and Services (Mobisys 2009), June 22-25, Krakow, Poland.

S. Reddy, K. Shilton, J. Burke, D. Estrin, M. Hansen, M. Srivastava. **"Using context annotated mobility profiles to recruit data collectors in participatory sensing."** Fourth Intl. Symposium on Location- and Context Awareness, May 7-8, 2009, Tokyo, Japan. **Winner, Best Paper Award.**

J. Goldman, K. Shilton, J. Burke, D. Estrin, M. Hansen, N. Ramanathan, S. Reddy, V. Samanta, M. Srivastava, R. West. **"Participatory Sensing: A citizen-powered approach to illuminating the patterns that shape our world."** Woodrow Wilson Center for International Scholars, May 2009.

S. Reddy, K. Shilton, J. Burke, D. Estrin, M. Hansen, M. Srivastava. **"Evaluating participation and performance in participatory sensing."** Intl. Workshop on Urban, Community and Social Applications of Networked Sensing Systems (UrbanSense 08), held in conjunction with ACM Sensys 2008, November 4, 2008, Raleigh, North Carolina.

S. Reddy, J. Burke, D. Estrin, M. Hansen, M. Srivastava. **"Determining transportation mode on mobile phones,"** *ISWC 2008: Twelfth IEEE Intl. Symposium on Wearable Computers*, Pittsburgh, Pennsylvania, Sept. 28 - Oct. 1, 2008.

J. Burke. **"Nevermind ubiquity,"** *Ubiquitous Sustainability: Citizen Science & Activism Workshop, Ubicomp 2008*, Seoul, Korea, September 21, 2008. (accepted; was unable to attend)

M.Y. Mun, D. Estrin, J. Burke, M. Hansen, **"Parsimonious Mobility Classification using GSM and WiFi Traces,"** *HotEmNets 08*.

K. Shilton, J. Burke, D. Estrin, M. Hansen, M. Srivastava. **"Achieving Participatory Privacy Regulation: Guidelines for CENS Urban Sensing."** CENS Technical Report, June 2008. (Pending.)

K. Shilton, N. Ramanathan, S. Reddy, V. Samanta, J. Burke, D. Estrin, M. Hansen, M. Srivastava. **"Participatory Design of Urban Sensing Networks: Strengths and Challenges,"** *Participatory Design Conference*, Bloomington, Indiana, Sept. 30 - Oct 4, 2008.

D. Kim, N. Petersen, M. Rahimi, J. Burke, D. Estrin, L. Arab. **"Rewind: Leveraging Everyday Mobile Phones for Targeted Assisted Recall,"** *UCLA Computer Science Technical Report 080016*, June, 2008. <http://fmdb.cs.ucla.edu/Treports/Rewind.pdf>

K. Shilton, J. Burke, D. Estrin, M. Hansen, M. B. Srivastava. **"Participatory Privacy in Urban Sensing,"** *Intl. Workshop on Mobile Device and Urban Sensing (at IPSN)*, St. Louis, Missouri, April 21, 2008. (Invited paper.)

K. Shilton, J. Burke, D. Estrin, M. Hansen, **"Privacy and Participation in Ubiquitous Information Systems: Information Ethics when Mobile Phones are Sensors,"** *Third Annual iConference*, Los Angeles, CA, February 28 – March 1, 2008.

E. Agapie, G. Chen, D. Houston, E. Howard, J. Kim, M. Y. Mun, A. Mondschein, S. Reddy, R. Rosario, J. Ryder, A. Steiner, J. Burke, D. Estrin, M. Hansen, M. Rahimi, **"Seeing Our Signals: Combining location traces and web-based models for personal discovery,"** *Ninth Workshop on Mobile Computing Systems and Applications (HotMobile)*, February 25-26, 2008.

S. Reddy, A. Parker, J. Hyman, J. Burke, D. Estrin, M. Hansen, **"Image Browsing, Processing, and Clustering for Participatory Sensing: Lessons from a DietSense Prototype,"** *Fourth Workshop on Embedded Networked Sensors (EmNets 2007)*, Cork, Ireland, June 25-26, 2007.

E. Mendelowitz, J. Burke, J. Brush. **"Serendipity,"** (demonstration/poster), *O'Reilly's Where 2.0 Conference*, San Jose, CA, May 29-30, 2007.

V. Samanta, J. Ryder, S. Chaudhuri, J. Burke, D. Estrin, F. Wagnmister. **"UCLA/Cisco Metropolitan Wi-Fi Research Network,"** Poster, *LANMAN 2007*, June 10-13, 2007, New Jersey.

H. Park, M. Srivastava, J. Burke. **"Design and Implementation of Wireless Sensor Networks for Intelligent Light Control,"** *IPSN SPOTS '07* Cambridge, MA.

A. Parker, S. Reddy, T. Schmid, and K. Chang (UCLA), G. Saurabh (Google), M. Srivastava, M. Hansen, J. Burke, D. Estrin (UCLA), Mark Allman and Vern Paxson (ICSI). "**Network System Challenges in Selective Sharing and Verification for Personal, Social and Urban-Scale Sensing Applications.**" *Hotnets 2006*, November 29, 2006.

J. Burke, D. Estrin, M. Hansen, A. Parker, N. Ramanathan, S. Reddy, M. B. Srivastava. "**Participatory sensing,**" *World Sensor Web Workshop, ACM Sensys 2006*, Boulder, Colorado, October 31, 2006.

R. West, J. Burke, E. Mendelowitz, JP Lewis, C. Kerfeld. "**ACTG to Calligraphy: Genetic Visualization for Ecce Homology.**" *12th Annual IEEE Symposium on Information Visualization*, October 29 – November 23, 2006.

S. Reddy, T. Schmid, A. Parker, J. Porway, J. Mascia, A. Joki, J. Burke, M. Hansen, D. Estrin, and M. Srivastava. "**UrbanCENS: Sensing with the Urban Context,**" *UbiComp 2006 Demonstration*, September 7-11, 2006.

M. Srivastava, M. Hansen, J. Burke, A. Parker, S. Reddy, G. Saurabh, M. Allman, V. Paxson, D. Estrin. "**Wireless urban sensor systems.**" *CENS Technical Report #65*. Center for Embedded Networked Sensing, UCLA, April, 2006.

H. Park, J. Friedman, P. Gutierrez, V. Samanta, J. Burke, M. B. Srivastava, "**High Fidelity and Multi-Modal Light Sensing Module for Wireless Sensor Networks,**" The Fifth International Conference on Information Processing in Sensor Networks (IPSN 2006), April 2006.

H. Park, J. Friedman, J. Burke, M. B. Srivastava. "**A New Light Sensing Module for Mica Motes**", *IEEE Sensors 2005*, Irvine, CA, October 31 – November 3, 2005.

H. Park, J. Friedman, P. Gutierrez, V. Samanta, J. Burke, M. B. Srivastava. "**Illumimote: A High Performance Light Sensor Module for Wireless Sensor Networks.**" *Design Automation Conference*, San Francisco, July 24-28, 2006. **Winner, Second Place, Systems, 2006 Design Contest.**

A. Marianantoni, H. Park, J. Friedman, V. Holtgrewe, J. Burke, M. Srivastava, F. Wagnister, W. Kaiser, W. McDonald, J. Brush. "**Demonstration: Sensor Networks for Media Production.**" *Second ACM Conference on Embedded Networked Sensor Systems (Sensys '04)*, November 3-5, 2004, Baltimore, Maryland.

E. Mendelowitz and J. Burke, "**Kolo and Nebesko: A Distributed Media Control Framework for the Arts.**" *First Intl. Conference on Distributed Frameworks for Multimedia Applications (DFMA '05)*, February 6-9, 2005, Besançon, France.

R. West, J. Burke, C. Kerfeld, E. Mendelowitz, T. Holton, JP Lewis, E. Drucker, W. Yan, "**Ecce Homology.**" *Design and Visual Communications Sketches, SIGGRAPH 2004*, Los Angeles, August 8-12, 2004.

N. M. Su, H. Park, E. Bostrom, J. Burke, M. B. Srivastava, D. Estrin, "**Augmenting Film and Video Footage with Sensor Data.**" *Second IEEE International Conference on Pervasive Computing and Communications*, Orlando, Florida, March 14-17, 2004.

J. Burke, E. Mendelowitz, J. Kim, and R. Lorenzo. "**Networking with knobs and knats: Towards ubiquitous computing for artists.**" *Ubiquitous Computing 2002*, Concepts and Models Workshop, Gothenburg, Sweden, September 29 - October 2, 2002.

E. Mendelowitz and J. Burke. "**A distributed control system and scripting language for 'interactivity' in live performance.**" *First International Workshop on Entertainment Computing*, Makuhari, Japan, May 17-19, 2002.

F. Wagnister and J. Burke. "**Networked multi-sensory experiences: Beyond browsers on the web and in the museum,**" *Museums and the Web 2002 Conference*, Boston, MA, April 17-20, 2002.

J. Burke, A. Shive, and F. Waggmister. "**Macbett: A Case Study of Performance & Technology for Dynamic Theater Spaces.**" *IEEE Multimedia Technology and Applications Conference*, Irvine, California: November 7-9, 2001.

POPULAR AND TRADE PUBLICATIONS

J. Burke, D. Estrin, W. Kaiser, G. Pottie. "**Community-based participatory sensing of Los Angeles traffic conditions,**" March 12, 2007, requested submission to April 2, 2007, UCLA Anderson Forecast Panel on *The Geography of the Los Angeles Economy*.

J. Burke. "**But will it sync to my Palm? Early adventures in 'smart stages' for live performance.**" *Entertainment Design*, October 2001.

INTERVIEWS

J. Hanson, "**Jeff Burke,**" G2 Gallery Podcast, Los Angeles, October 7, 2014.

T. Longwell, "**Film schools feeding the hunger for online content,**" Streamdaily, online, September 5, 2014.

C. Luther. "**Art and Science: Opposites Attract,**" UCLA Magazine, April 1, 2014.

R. Shahbazi, "**Website Brings LA Parks to Digital Life,**" Eyewitness News, ABC 7, Los Angeles, California, March 13, 2014.

M. Ehrenkranz. "**Google Glass Goes To College: Professors Weigh In On The Wearable Device.**" *International Digital Times*, December 4, 2013.

J. Farman. "**Digital Performance and the HyperMedia Studio: An Interview with Jeff Burke,**" *Extensions: The Online Journal of Embodiment & Technology*, Volume 3, 2007.

D. Abel and J. Stevens. "**'Mash-Ups' Will Revolutionize How Planners and Citizens View City Planning.** (Jeff Burke, UCLA)" *The Planning Report*, August 2006.

REVIEWER / ADVISORY

Technical Program Committees: ACM ICN 2016 (Co-Chair); IEEE INFOCOM 2016 MUSIC Workshop; ACM ICN 2015, Security of Emerging Networking Technologies 2015 (NDSS), ACM ICN Conference 2014; ICNP 2013; INFOCOM NOMEN 2013; SICOMM ICN 2013; ACM MobiHoc ENOMND 2012; Second Annual International Conference on Mobile Computing, Applications, and Services (MobiCase) 2010; First IEEE International Workshop on Data Management in Participatory Sensing, 2012.

Invited external reviewer, Macarthur Foundation Fellowship ("genius grant"), 2015.

Workshop participant, Yosemite Slough project interpretive design, California State Parks Foundation, San Francisco, April 15, 2015.

Invited external reviewer, UC Santa Barbara Media Arts & Technology Graduate Show, 2014. (Declined due to schedule conflict.)

National Science Foundation, Cyberlearning program review panel, 2013.

LA County Natural History Museum, Citizen Science working group, 2013.

Scientific Advisory Board, 2012 BIT 2nd Annual International Congress of u-Homes, and the 2012 BIT 1st Annual World Congress of Cultural and Creative IT Industries – Dalian.

Springer (2012) – Book chapter review.

MIT Press (2010) – Book review.

Editorial Advisory Board, *Information Assurance and Security Ethics in Complex Systems: Interdisciplinary Perspectives*, IGI Global (2009).

Grant review including the *Hong Kong Research Council, University of California Discovery Grant Communications, Computing and Energy Review Committee* (2009, 2011).

Reviewer for peer-reviewed publications including *IEEE Network Computing, Computer Communications, IBM Journal of Research and Development, Transactions on Information Technology in BioMedicine* (2008), *Remote Sensing of Environment* (2010), *Transactions on Mobile Computing* (2010), *Solutions: For a Sustainable and Desirable Future* (journal; 2011), *Journal of Systems and Software* (2011).

INVITED CONFERENCES AND PRESENTATIONS

UCLA School of Theater, Film and Television Executive Board, "UCLA TFT Future Storytelling Summer Institute 2014," October 30, 2015.

Osaka University – Murata Lab, "NDN "NP" Application Update: Building Automation & Management / Io," November 12, 2015, Osaka, Japan.

Panasonic Advanced R&D, "Named Data Networking," November 11, 2015, Osaka Japan.

NSF FIA PI Meeting 2015, "NDN Network Environments Update", 2015, Arlington, VA.

UCLA Parents Weekend, "Engagement, Creativity, and Technology: Research in the Arts at UCLA REMAP," October 31, 2015, Royce Hall, UCLA.

ACM ICN 2015, "ICN Roadmaps for the next 2 years," Panel participant with Cisco, Orange, ESnet, PARC, Huawei, September 2015, San Francisco, CA.

NDN Community Meeting, "The Future of the Internet is the Future of Storytelling," September 29, Los Angeles, CA.

ICCCN Cyberphysical Systems Panel, "From the Internet of Things to the Internet of Experiences," August 3, 2015, Las Vegas, NV.

IEEE ICME MuSIC Workshop, Invited Keynote and panel moderator. "ICN as an Enabler for New Forms of Multimedia Experience," July 3, 2015, Torino, Italy.

Small Data CRI 2015, Invited workshop participant for Cornell Tech Small Data workshop, June 15-16, New York.

CCNxCon, Invited panel participant for Network Architecture panel with Mark Stapp of Cisco, GQ Wang of Huawei, and Ignacio Solis of PARC, May 21, 2015, San Jose.

Transforming Hollywood 6, Panel Moderator for "There's Art all Around Us: The Aesthetics of Immersive Experiences", May 8, 2015. Recruited panelists Ana Serrano, Chief Digital Officer, Canadian Film Centre; Sara Thacher, Creative Lead, Walt Disney Imagineering Research and Development; Barry Threw, Director of Software, Obscura Digital; Fred Turner, Associate Professor of Communication, Stanford University, May 8, 2014.

What it Means to Be American, invited workshop participant, Hattaway Communication / Ford Foundation, at the UCLA School of Theater, Film and Television, April 30, 2015. Also part of the TFT team that coordinated the event.

Beijing International Film Festival, panel participation. "Training the Next Generation of Storytellers: The Intersection of Research and Practice," April 20, 2015.

On*Vector, invited presentation. "Named Data Networking (NDN) Update," San Diego, February 25, 2015.

World Presidents' Organization, Southern California Chapter. "Named Data Networking, an Architecture for the Future Internet," Invited speaker as part of the WPO Visit to UCLA "Changing Los Angeles and the World: Great Innovation in Our Own Backyard." (One of five presenters selected from the campus), November 20, 2014.

ACM Information Centric Networking, "ICN at the Edge," Invited panel participation, September 24, 2014, Paris, France.

Cornell Tech, "Why Architecture Matters to Everyone: Creativity on the Future Internet," Cornell Connected Media Symposium, August 28, 2014.

Academics @ Google, "Voices from Above: Storytelling with Glass," YouTube Space LA / Google internal broadcast, July 16, 2014.

IFIP Networking 2014, "Why architecture matters to everyone: Creativity on the Future Internet," Invited Keynote, Trondheim, Norway, June 3, 2014.

NSF Future Internet Architecture PI Meeting, "NDN Next Phase – Network Environments," Arlington, VA, May 19, 2014.

The Conditions of Algorithmic Life, "Occam's Hourglass," Mellon Research Initiative in Digital Cultures, Invited Keynote, UC Davis, May 15-16, 2014.

Huawei Corporate-level Science & Technology Workshop, "Named Data Networking and the Internet of Everything," Invited talk, Huawei headquarters, Shenzhen, China, May 13, 2014.

Big Conference, "Big Data and the Big Network," Invited Talk, University of California, Irvine, April 11, 2014.

Huawei Science & Technology Workshop, "Named Data Networking and the Internet of Everything," Invited talk, Futurewei, Santa Clara, March 11, 2014.

Woodbury University, "Stories to Systems to Architectures," invited talk, January 13, 2014.

Cinegrid, "Named Data Networking Video Streaming and Conferencing," invited talk, December 10, 2013.

Packet Video Conference, co-chair, Information-Centric Networking Special Session. Cisco, San Jose, December 12, 2013.

National Speakers Conference, "The Next Generation of Storytelling: The Future of the Entertainment Industry in a Mobile World," invited presentation, October 25, 2013.

ASIA Future Internet Summer School 2013, invited talk, "Emerging Application Design Patterns in Named Data Networking," Chinese University of Hong Kong, August 11, 2013.

Qualcomm Research, invited talk, "Named Data Networking: Content, Creativity and the Future Internet," San Diego, June 28, 2013.

NTT Research, invited talk, "Named Data Networking: Content, Creativity and the Future Internet," Yokosuka, June 13, 2013.

Waseda University, invited talk, "Named Data Networking: Content, Creativity and the Future Internet," Tokyo, June 13, 2013.

Keio University, invited talk, "Named Data Networking," Yokohama, June 12, 2013.

Panasonic Research, invited talk, "Named Data Networking," Osaka, June 11, 2013.

Cyber Kansai Board Meeting, invited talk, "Named Data Networking Research: NDN Video Streaming Application," Osaka, June 10, 2013.

ON*Vector Workshop, invited talk, "Named Data Networking: Content, Creativity and the Future Internet," February 28, 2013 California Institute for Telecommunications and Information Technology, San Diego.

TTI/Vanguard Net Futures, invited talk, "Named Data Networking: Content, Creativity and the Future Internet," February 21, 2013, Marina Del Rey, CA.

Centro Hipermediatico Experimental Latinoamericano, invited talk, "Stories to Systems to Architectures: A Collaborative Future for Advanced Technology in Live Performance," December 2012.

University of California, Irvine, Computer Science Seminar Series, "Named Data Networking: Cyberphysical Applications Research," November 9, 2012.

Marseille WebFest 2012, invited speaker, "Transmedia on the Screen and in the World," October 2012.

Marseille WebFest 2012, invited panelist, "Educators of the Web World," October 2012.

Joint Research Institute in Science and Engineering, "Named Data Networking and the Future of Civic and Cultural Information Technology" -- plenary talk, Peking University and UCLA. (Los Angeles) May 2, 2012.

Institute for the Future, Palo Alto, invited participation in daylong workshop on technology opportunities for Qualcomm, March 28, 2012.

GENI Engineering Conference, Live broadcast over NDN protocol to conference demonstration session, Los Angeles, CA, March 14, 2011.

Shanghai Jiao Tong University, "Named Data Networking." Shanghai, China. December, 2011.

First Annual U-Home Conference, "Named Data Networking." Hefei, China. December, 2011.

Physical Computing in Science. Title tbd. iCIS, Argonne / Los Alamos workshop (see above). July, 2011.

MIPTalk, "From STEM to STEAM." June 12, 2011. <http://miptalk.com/>

Imagine:Create, Northern Ireland. "REMAP: Community, Culture, Technology." Derry, Northern Ireland. March 29, 2011.

Imagine:Create, Northern Ireland. "Live performance as collaborative digital media research." Derry, Northern Ireland. March 29, 2011.

IETF Workshop on the Internet of Things. "Beyond task-oriented perspectives: The IoT as experience infrastructure." Prague, Czech Republic. March 25, 2011.

UCLA CENS. "Embedded and Mobile Applications of Named Data Networking." February 25, 2011.

University of Illinois, Urbana-Champaign. "Embedded and Mobile Applications of Named Data Networking." February 11, 2011.

IEEE Phoenix Section. *Keynote presentation*. "Participatory Sensing and the Future Internet," November 19, 2010, Phoenix.

RAND. "Participatory Sensing and the Future Internet," October, 2010, Santa Monica.

First European Summit on Future Internet Architecture. *Keynote presentation*. "Participatory Sensing and the Future Internet," June 2, 2010, Luxembourg.

UCSD ICAM Undergraduate Course. April 13, 2010.

MIT Center for Future Storytelling. "Ornament or Instrument: Storytelling and Technology." March 8, 2010, Cambridge, Mass.

USC Multimedia Lecture Series. "Fabian Wagmister & Jeff Burke." March 4, 2010, Los Angeles, CA.

Disney Imagineering R&D Tech Talk. "Creating Distributed Experience: The Need for Authoring Tools and Infrastructure." November 9, 2009, Glendale, CA.

High Performance Transaction Systems, 13th Annual, "Participatory Sensing: Planning Life-long Data Streams," Asilomar, California. Oct. 12-15, 2009.

National Science Foundation, "Future Internet Summit," Arlington, Virginia. Oct. 12-15, 2009.

CENS, "Urban Sensing as Experience Infrastructure." August 21, 2009.

Cisco Systems. July 7, 2009.

Sun Laboratories. July 8, 2009.

Nokia Forum PRO University, Budapest. Invited attendee of developer / university conference, Budapest, Hungary, November 19-21, 2008.

NSF FOCUS Program at UCLA. Presentation for community college students on opportunities in art and engineering as part of this NSF-funded initiative, August 27, 2008.

California Institute for the Arts. Class presentations on teaching and research to the MFA Teaching Practicum and seminars in Film, March 20, 2008.

Center for Embedded Networked Sensing, UCLA "Because the Stakes are Higher: Ethics in Participatory Sensing", invited talk with Katie Shilton (Information Studies), January 11, 2008.

UC Berkeley, Toyota, "Meeting of the Minds", invited conference on sustainable cities, September 12-13, 2007.

NSF FOCUS (Broadening Participation in Computing program), UCLA, Los Angeles, invited presentation on urban sensing and multimedia performance, August 23, 2007.

Rhodopi International Theater Collective, Smolyan, Bulgaria, "8 questions", invited lecture on multimedia theatrical performance with Vanessa Holtgrewe, August 8, 2007.

Institute for the Future, Palo Alto, "Experiences of Reality", invited participation in daylong workshop on technology opportunities for SK Telecom, Korea, July 26, 2007.

UCLA CENS and Google, Los Angeles, invited presentation on urban sensing and multimedia performance, July 12, 2007.

Fuji Xerox Palo Alto Research Lab (FXPAL), Palo Alto, "Urban sensing, theater, and the space-time aquarium," invited presentation, June 15, 2007.

UCLA Digital Innovations Day, Los Angeles, REMAP Booth on Remapping LA, "Cultural Civic Computing in Los Angeles: Cultural Identity, Participatory Technology and Community Development: Specificities and Globalities", May 10, 2007.

Institute for the Future, Palo Alto, "Sensors and Sensemaking", invited participation in daylong workshop on 5-6 year horizon opportunities in sensor/human interaction, April 10, 2007.

Nokia Research Center, Palo Alto, "Urban sensing", invited presentation with Deborah Estrin and Mark Hansen, March 9, 2007.

UC Digital Arts Research Network epicenter 07, "Cultural Civic Computing and Urban Sensing", invited presentation, Riverside, January 27, 2007.

University of California, Irvine, "Participatory Urban Sensing", invited presentation to UCI RESCUE project, Irvine, November 21, 2006.

Digital Hollywood University Project, Panel on "Inventing Next Generation Communications – Interdisciplinary Collaboration – Computer Science, Engineering, Design and Personal and Social Communication." Santa Monica, October 25, 2006.

Nanyang Technical University, Singapore. "Participatory sensing." Invited guest lecture, October 17, 2006.

Dept. of Engineering, National University of Singapore. "Embedded expression – Mobile discovery." Invited guest lecture, October 15, 2006.

Canada California Strategic Innovation Partnership Summit, invited participant. Organized by the Office of the President, University of British Columbia. Vancouver, BC, June 11-12, 2006.

Center for Embedded Networked Sensing. Seminar on "Partisan: Towards an architecture for participatory sensing" with Sasank Reddy. UCLA, August 25, 2006.

Digital Hollywood University Project, Panel on "Inventing Next Generation Communications – Interdisciplinary Collaboration – Computer Science, Engineering, Design and Personal and Social Communication." Santa Monica, March 29, 2006.

European Commission Joint Research Center, Institute for Prospective Technological Studies. "Discovery, expression and responsibility: Design dimensions for ambient intelligence." Invited participation and presentation at conference on *Safeguards in a World of Ambient Intelligence*. Brussels, March 21-22, 2006.

Google. "Urban sensing, social networking and the third thing," Mountain View, California, March 17, 2006. Joint presentation of REMAP and the Center for Embedded, Networked Sensing faculty. (Arranged this meeting.)

Walt Disney Imagineering. "UCLA Center for Research in Engineering, Media and Performance," Glendale, California, February 27, 2006. Presentation for a delegation of the Nanyang Technical University, South Korea.

Syllabus Conference 2005. "Media Experience Beyond the Keyboard, Mouse, and Screen: Pervasive Computing & Media-Rich Environment," UCLA, Los Angeles, July 28, 2005.

University of California, Santa Barbara, Media Arts and Technology/ Digital Arts, October 4, 2004. Lecture with Ruth West and Eitan Mendelowitz. Invited presentation "Ecce Homology: Can Aesthetic Approaches Nurture Discovery in Genomic Biology?"

University of California, San Diego, Center for Research in Computing and the Arts/Visual Arts Department, May 4, 2004. Invited presentation "In silico v1.0: Ecce Homology"

Plasmatica 040404 Colloquium on New Media, University of California, Berkeley, April 4 2004. Invited presentation on "Ecce Homology."

STEP-UP Engineering / Science Convocation, UCLA. Panel on opportunities after graduate school, March 4, 2005.

Cyberspace: A Workshop on Playing, Gaming and Learning, UCLA, January 23, 2004 Invited presentation on "Ecce Homology."

Center for Embedded Networked Sensing (CENS), Research Retreat, January 24, 2004 and Research Review, October, 2004. Invited participation and presentation on entertainment applications of sensor networks.

Intel Research, Berkeley, California, June 16, 2003. Seminar: "Sensor networks, live performance, and media production."

Wireless Internet – Data & Enterprise Applications, University of California, Los Angeles, May 18 2003. Talk with Fabian Wagmister and William McDonald (UCLA Film and Television) on the applications of emerging technologies to day-to-day film and television production.

Center for Embedded Networked Sensing (CENS), Los Angeles, April 18, 2003. “Wireless sensor networks for art and entertainment applications.”

Intel Research, Seattle, Washington, April 2, 2003. Seminar on wireless sensor networks for film and television production.

Computer Science & the Humanities, National Academy of Sciences, Washington, D.C. Jan. 17-18, 2003. One of approximately seventy computer and information scientists, technologists, and humanists invited to attend. Funded by the Carnegie Corporation.

National Museum of American History, Smithsonian Institution, Washington, D.C. January 16, 2003. Presentation on physically interactive multimedia environments for museum experiences.

RePerCuTe: Reflexions on Performance, Culture & Technology, Los Angeles, CA, May 10-11, 2002. Invited presentation on The Iliad Project, with Jared Stein and Eitan Mendelowitz. A multicultural dialogue among Latin American and North American artists about the technological transformations taking place in our cultures and the corresponding expressions in the performance arts.

UC Digital Media Innovation Program: Technology & Content Forum, San Diego, CA, April 27, 2002. Invited presentation on The Iliad Project, with Jared Stein and Adam Shive

Museums and the Web 2002 Plenary Panel, Boston, MA, April 20, 2002. Plenary panel: Exhibit Design as Experience Design: Merging the worlds of museums, technology, and performance. Demonstration presentation: hamletmachine

Disney Online Technology Forum, Glendale, CA, February 13, 2002. Invited presentation on research and activities at the HyperMedia Studio, with Fabian Wagmister

Building Blocks Workshop, National Institute for a Networked Cultural Heritage, Washington, D.C. September 20-24, 2000. (Member of the Performing Arts Field Committee.) Building Blocks was convened to define ways that the intellectual needs of humanists and artists can shape technical solutions and to articulate by field and across disciplines the most pressing needs in the humanities that networked computing can address. Conference funded by the Rockefeller Foundation, the National Science Foundation and the Delmas Foundation.

OTHER THEATRICAL PRODUCTION EXPERIENCE (SELECTED)

Stage Manager, *Les Cenci*. (1998)

UCLA Mainstage production directed by Rene Migliaccio. Performed at UCLA and University of Paris 6 & 7.

Stage Manager, *The Prodigious Snob*. (1997)

UCLA Mainstage production directed by Ellen Geer.

Asst. Stage Manager, *Campaign UCLA Gala Kickoff.*, (1997)

UCLA Fundraising event directed by Gary Gardner.

Asst. Stage Manager, *The Rake's Progress*. (1997)

UCLA Mainstage opera production directed by Neil Peter Jampolis. Conducted by Wm. Vendice.

Stage Manager, *Hurlyburly*. (1996)

UCLA Workshop production directed by James Shanta.

Stage Manager, *The Possessed*. (1996)

UCLA Mainstage production directed by Leon Katz.

University, community theater, and high school (as student and alumni)

Stage management, production management, technical direction, video systems, lighting design, and/or sound engineering for productions in 1992-2005 including *Annie*, *Annie Warbucks*, *Anything Goes*, *Bye Bye Birdie*, *The Boyfriend*, *Diary of Anne*

Frank, Father of the Bride, Fiddler on the Roof, Fields of Fire, Glitter Prince, Guys & Dolls, Importance of Being Earnest, Lil' Abner, Music Man, Oklahoma, The Ophelia Project, Our Town, Pirates of Penzance, Real Inspector Hound, Seven Brides for Seven Brothers, You Can't Take it With You Most of these productions involved the supervision and instruction of many high school students during setup, construction, and technical rehearsal. Venues include: UCLA, St. Paul's Lutheran Church & School (Orange), Lutheran High School of Orange County, Culver City Academy of the Visual and Performing Arts.