

CARLOS CASTELLANOS

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PROFILE

Carlos Castellanos is an interdisciplinary artist and researcher. His research and art practice focus on software/network art, and physiological computing. He is exploring the aesthetics of information technologies and their effects on lived embodied experience

SELECTED PROJECTS AND EXHIBITIONS

2011-12 **Biopoiesis.** A series of experiments exploring the relationships between structure, matter, and self-organization, with a goal toward the development of autonomous computation and control systems in what can be called a “primordial computational soup”. The system harnesses electrochemical reactions that grows into dendritic metallic threads – ultimately leading to the formation of a continuously shifting signal network (not unlike a neuronal cell assembly). These dendrites are fluid and unstable: they bifurcate and dissipate in unpredictable ways, leading to resistance changes that modify the flow of information through the network.

Currently in progress

Exhibitions:

2011/07 - Gallery Gachet, Vancouver, BC

2010-11 **Protocol.** Interactive installation that features a set of intelligent acoustic drums that can “bite back” whenever they are struck. The multi-modal interface allows these intelligent drums to sense and communicate with a participant via sound, rhythmic patterns and electrical stimulation of the participant’s skin.

Currently in progress

2008-09 **Naos.** A biometrics and psychological testing system, which includes a “biometric capsule” that measures ones physiological responses to image stimuli. Collaboration with Luther Thie.

Exhibitions:

2009/03 - Root Division Gallery, San Francisco

2008/08 - Montalvo Arts Center, Saratoga California as part of their Artist-in-Residence program.

2007 **Biomorphic Aggregator** is a bio-responsive network data collection and visualization system presented as an art installation. The system responds to the participant's mood and affective responses to various media collected from the web. It manipulates and triggers media via the body's physiology. It renders a visual and sonic interpretation of this media, as influenced by the participant's physical states.

Exhibitions:

2007/08 - Institute for Contemporary Art, San Jose, California

2006 **Fleshserver** involves a series of experiments in which a miniature computer with an embedded web server is interfaced with several frog body parts. The server triggers physical activity in the frog's body based on input from networked users via a web interface. The action can be seen both in the gallery and online, via a live streaming web camera. A live installation/event was exhibited at the San Jose State University Black Gallery in October 2006.

- 2006 **BodyDaemon** is an Internet server that is powered and configured by a participant's physiological states. The project also features a protocol for exchanging bio/server data across the Internet.
- Exhibitions:
2006/08 - ZeroOne/ISEA 2006 Festival and Symposium of Electronic Art
- 2005 **Unique Impressions.** is a Carnivore client, a network visualization and sonification software program that measures the amount communication activity between computers on the local network, and between computers on the local network and the Internet. More specifically, Unique Impressions measures the amount of activity in each "unique impression" on a network.
- Exhibitions:
2005/12 - San Jose State University White Gallery
2005/05 - College of Creative Studies media art show, UC Santa Barbara
- 2005 **Particle Evolver** is an interactive application which uses genetic algorithms to evolve a 3-D particle system. Just as in biological evolution, methods such crossover, mutation and natural selection are used to evolve the system. Properties of the particle system such as speed, color and number of particles are used as genetic material. The user is the selective agent, working as what's know in GA parlance as the fitness function. All that a user of this system has to do is designate whether he or she likes what they see. If they do, the system continues to evolve toward the predetermined targets, if not the population is killed off and a new one is randomly generated.
- 2003 **Presence.** Exploring ideas of time and place, this piece features a looping digital video of an indoor space. Whenever a participant walks close enough to the projected video, another video (of an outdoor space) is displayed in its place, but only in the area where the person is standing.
- Exhibitions:
2003/12 - New Media Night, Works Gallery, San Jose, California
- 2003 **Connected Memories** is an interactive piece exploring themes of time and memory. This utilized common everyday objects such as keys or old photographs. These objects, along with their associated memories, connotations and denotations were all stored in a database which was accessed via a 3-dimensional interface. This interface served to demonstrate their relationships and interconnectedness.
- Exhibitions:
2004/04 - San Francisco State University Art Show, San Francisco
- 2002 **I Remember.** Film/video piece exploring memory. Is a memory perceived in the same linear fashion in which it occurred? Is memory just a reconstructed version of the original? How are memories connected?
- Exhibitions:
2002/12 - Video Synchrony, StudioZ, San Francisco
- 2002 **Memoria Technica.** Digital information is experienced as abstract, arbitrary and ultimately ephemeral. Furthermore, according to Jean Baudrillard there is also an inverse relationship between information and meaning. This piece explores these ideas by using sample-rate conversion, compression and other digital means of adding and removing information. A single still image was used.
- Exhibitions:
Stillwell Art Show, San Francisco State University, San Francisco
- 2002 **Simulations.** Self-released CD of electronic music compositions.

FORMAL EDUCATION

- 2007- present School of Interactive Arts and Technology (SIAT), Simon Fraser University – Vancouver, BC Canada
Ph.D. (expected 2012)
- 2005-07 CADRE Laboratory for New Media, San Jose State University - San Jose, CA.
MFA, Digital Media (2007)
- 2004-05 Media Arts & Technology Program, University of California, Santa Barbara - Santa Barbara, CA.
- 2001-04 Conceptual/Information Arts Program, San Francisco State University - San Francisco, CA
BA, Art (2004)
- 1988-90 Music/Sound Engineering Program, Miami-Dade College - Miami, FL

PUBLICATIONS AND CONFERENCE PRESENTATIONS

- 2010 Castellanos, C., Gromala, D. & Pasquier, P. (2010). Heterogenesis: Collectively Emergent Autonomy. Presented at the Workshop on Interactive Multimedia Installations and Digital Art, ICME 2010, Singapore.
Castellanos, C., & Gromala, D. (2010). The Symbiogenic Experience: Towards a Framework for Understanding Human-Machine Coupling in the Interactive Arts. In *Technoetic Arts Journal* 8.1
- 2009 Castellanos, C., & Gromala, D. (2009). Symbiogenic Experiences in the Interactive Arts. In *Digital Arts and Culture*. Presented at the Digital Arts and Culture, Irvine.
Castellanos, C., & Gromala, D. (2009). The Symbiogenic Experience: Towards a Framework for Understanding Human-Machine Coupling in the Interactive Arts. In *Consciousness Reframed 2009*. Presented at the Consciousness Reframed, Munich.
Castellanos, C., & Gromala, D. (2009). The Symbiogenic Art Experience: A Phenomenological and Aesthetic Approach to the Question of Human-Machine Co-evolution. Presented at the Society of Literature, Science and the Arts, Atlanta.
Castellanos, C., & Schiphorst, T. (2009). BodyDaemon. In *Creativity and Cognition*. Presented at Creativity and Cognition, Berkeley, California.
- 2008 Castellanos, C., Pasquier, P., Thie, L., & Che, K. (2008). Biometric tendency recognition and classification system: an artistic approach. In *Proceedings of the 3rd international conference on Digital Interactive Media in Entertainment and Arts* (pp. 166-173).
- 2007 Castellanos, C. (2007). Biomorphic Aggregator. Masters Thesis, San Jose State University.
Castellanos, C. (2007). BodyDaemon. In *Subtle Technologies 2007*. Presented at Subtle Technologies 2007, Toronto, Canada.
"Body in Quotes," Invited session moderator.
Borders Boundaries and Liminal Spaces (conference hosted in the online virtual world Second Life.)
Panelists: Stuart Bunt, Nathaniel Stern, Jeremy Turner. Hosted by Ars Virtua (arsvirtua.com/borders)
- 2006 Castellanos, C. (2006). Towards New Bodies and New Biologies: Life as Code, Body as Protocol. In *International Digital Media & Arts Association*. Presented at International Digital Media & Arts Association Conference, Miami University, Oxford, Ohio.
- 2005 Castellanos, C. (2005). Towards New Bodies and New Biologies: Life as Code, Body as Protocol. *Switch: The New Media Art Journal* of the CADRE Laboratory, 21. Retrieved October 13, 2009 from http://switch.sjsu.edu/mambo/index.php?option=com_content&task=view&id=276&Itemid=41.

RESEARCH INTERESTS

Biopotentials - biotechnology - network protocols - databases - data mapping, - sonification and visualization - electronic music composition - sound design - cultural theory and media analysis - body criticism - embodied cognition - phenomenology.

TEACHING

- 2011 Teaching Assistant
Supervisor: Michael Filimowicz (mfa13@sfu.ca)
Media Across Cultures (IAT206), Simon Fraser University
- 2010 Teaching Assistant
Supervisor: Philippe Pasquier (pasquier@sfu.ca)
Sound Design (IAT 380), Simon Fraser University
- 2009 Teaching Assistant
Supervisor: Ben Unterman (bunterma@sfu.ca)
Interactive Arts (IAT 222), Simon Fraser University
- 2008 Teaching Assistant
Supervisor: Michael Filimowicz (mfa13@sfu.ca)
New Media Images (IAT 202), Simon Fraser University
- Teaching Assistant
Supervisor: Diane Gromala (dgromala@sfu.ca)
Speculative Design (IAT 431), Simon Fraser University
- 2007 Teaching Assistant
Supervisor: Susan Clements-Vivian (susan.clementsivivian@gmail.com)
Systems of Media Representation (IAT 100), Simon Fraser University
- 2005-06 Graduate Assistant
Supervisor: Joel Slayton (joel@well.com)
Graduate assistant for digital media classes and for developing and coordinating web forums and other online activities involving the CADRE Laboratory and the ZeroOne/ISEA2006 Festival.
- Teaching Assistant
Supervisor: Steve Durie (steve@cadre.sjsu.edu)
Art & Information (ART 101B), San Jose State University

AWARDS AND RECOGNITION

- 2011 School of Interactive Arts, Simon Fraser University Graduate Fellowship.
- 2010 School of Interactive Arts, Simon Fraser University Graduate Fellowship.
- 2009 School of Interactive Arts, Simon Fraser University Graduate Fellowship.
- 2008 Ebco/Eppich Graduate Scholarship in Intelligent Systems.
School of Interactive Arts, Simon Fraser University Graduate Fellowship.
- 2007 School of Interactive Arts, Simon Fraser University Graduate Fellowship.
- 2006-07 California State University Sally Casanova Pre-doctoral Scholar.
San Jose State University Graduate Equity Fellowship.
Violet Speddy Memorial Scholarship, SJSU Art Department.
Fengqui Award, SJSU Art Department.

San Jose State University Graduate Equity Fellowship.

2004-05 Nation Science Foundation IGERT Fellowship in Interactive Digital Multimedia.

1989-90 McKnight Scholarship, Miami-Dade College.

ACTIVITIES AND SERVICE

2008-09 Graduate Student Association, School of Interactive Arts & Technology, Simon Fraser University
Executive Committee Member

2007-08 Graduate Program Committee, School of Interactive Arts & Technology, Simon Fraser University
PhD Student Representative

2006-07 Switch, online journal of the CADRE Laboratory: switch.sjsu.edu.
Managing Editor.

PROFESSIONAL EMPLOYMENT

Several years experience in web and multimedia development for several Internet and multimedia companies:

2006-07 Carnegie Foundation for the Advancement of Teaching, Palo Alto, CA
Web Developer / Research Assistant

1998-07 Independent Contractor, San Francisco Bay Area, CA
Freelance interactive media developer in the greater San Francisco Bay Area.

2001-03 Center for the Enhancement of Teaching
San Francisco State University, San Francisco, CA
Interactive Media Developer

2000-01 Foote, Cone and Belding, San Francisco, CA
Lead Interactive Media Developer

1996-98 Independent Contractor, Miami, FL
Web Design & Multimedia Specialist

1992-96 Independent Contractor, Miami, FL
Sound Engineer

TECHNICAL SKILLS

Strong knowledge of contemporary digital media. Fluent in various programming and scripting languages (Java, PHP, MySQL, Javascript, X/HTML, CSS - working knowledge of Python, Visual Basic and C/C++). Strong knowledge of various media production applications and scripting languages (Flash/Actionscript, Director/Lingo, Max/MSP/Jitter). Experience in professional sound recording, mixing, editing and audio-video post-production as well as MIDI and digital audio software (ProTools, Digital Performer, etc.). Experience with electronic circuits, including Arduino, PIC and BasicStamp microcontroller development. Knowledge various sensors and biofeedback equipment. Knowledge of networking, including UNIX/Linux shells, server administration, etc. Knowledge of various graphics and video applications (such as Adobe Photoshop, Adobe Premiere, Final Cut Pro, Adobe Illustrator and Adobe Final Effects). Solid understanding of MacOS-based systems, hardware configuration, optimization and troubleshooting.