JOHANNES BIRRINGER
Researcher, School of Art and Design, Nottingham Trent University

emergent interaction: models of collaborative culture

Theories of emergence, as used variously by artificial-life scientists, dance technologists, digital artists, and choreographers, raise questions about how traditional aesthetic composition intersects with the organisation of information environments as programmable and responsive. This intersection provides new possibilities for movement, action, play, improvisation, expression, and meaning — especially in a collaborative mode. The relationship between what one might call sensory epistemes (the knowledge received and reincorporated continuously through sensory perception) and digital proprioception (from physical/performative interfaces like motion sensing/motion tracking technologies, wearable computing, and immersive performance environments) provides insight into the impact of telemediation on our physical performance capacities, cognition, and on audience and user behavior in these environments. An awareness of how such environments are used artistically, for research and development, for public sittings, and for training and pedagogy can be informed by the science and artificial-life derived contexts of complexity, and emergence.

CAROL BROWN + METTE RAMSGARD THOMSEN
Artistic Director, Carol Brown Dances
Mette Ramsgard Thomsen, Researcher, Bartlett School of Architecture

Reconceiving embodiment: the dance-architecture of Spawn

Spawn is an ongoing practice-based research project, which aims to design and realise the staging of real and virtual presences through embodied interfaces or mixed reality environments. Research for Spawn questions the limits of the body and its virtual representation, fusing the thinking of embodiment and space with the design of new technologies for the interfacing and display of digital environments. In Spawn, a camera tracking system identifies the shifting outlines of the performers’ bodies, which become input for a virtual other. The visualisation of this kinetically modelled virtual other is projected back into the physical space of the performance in real time, generating new forms of interaction and creating a blended environment of real and virtual spaces. Spawn provides a model for practice as research, which crosses different disciplines – dance, architecture and computer science - and networks of support and influence within scholarly and expert performance contexts.

BRIAN CORRIE
Coordinator, Collaboration and Visualization, IRMACS, Simon Fraser University

Visualization and Collaboration technologies in the performing arts

This presentation will be a technically oriented session on the impacts that visualization and collaboration technologies may have on the performing arts. The paper will discuss some of the work being done as part of the Westgrid project, and in particular look at the uses of visualization and collaboration technologies from a scientific computing perspective and relate to how these technologies might be applied to the area of performance.
LUCIANA DURANTI
Project Director, InterPARES, School of Library, Archival and Information Sciences, University of British Columbia

The same dance forever: is it possible or even desirable?

This paper will present the preliminary findings of InterPARES 2, an international multi-disciplinary research project that aims to develop theory and methods, strategies and standards for the permanent preservation of the authentic digital records resulting from artistic, scientific and e-government activities regardless on the face of media fragility and technological obsolescence. Several case studies have been conducted in the area of the performing arts, which are increasingly using computer technology as an essential component of the artistic works. The results of the case studies will be presented, the conceptual and methodological hypotheses derived by those results will be articulated, their relevance for dance will be discussed both in terms of preservation of the performance and of the capacity to re-enact it maintaining its identity and integrity, and dance-specific hypotheses for further research will be advanced.

MARTINE EPOQUE + DENIS POULIN
LarTech, Department of Dance, University of Quebec at Montreal

De LIFEanimation à la Multipartition infochorégraphique : de nouveaux termes pour la danse actuelle (From LIFEanimation to info-choreographic multipartition: new terms for contemporary dance)

With audiovisual and info-graphic technologies, our new software, LIFEanimation is a tool for gestural treatment and movement capture, which can influence the practice and domain of the human body in movement. 3D simulations of dance or functional movements, virtual dance, simulated choreography or other gestural elements of a project, preservation of existing dance pieces, 2D and 3D partitions in real time will facilitate the learning and resetting of choreographic works. Functional musculo-skeletal scanning, postural and cinematic diagnosis, prevention of injury and self-therapy are some possible applications for these technologies.

We will present: how we’ve proceeded to create the multimedia choreographic work Tabula Rasa and the gesture treatment of LIFEanimation; how numerical video has helped the choreography, allowing us to create the follow-up remotely (without the physical presence of the dancers); how we have conceived and materialized the realistic and abstract virtual dances; how all this research and creative/formative activity has contributed to help us develop and then experiment with this tool of info-choreographic notation for reconstruction, archiving and learning: our info-choreographic multipartition in real time.

Dr. DAVID KAUFMAN
Professor, Faculty of Education, Director, LIDC
Principal Investigator, SAGE for Learning Project

This session will outline the SSHRC INE Collaborative Research Initiative entitled “Simulation and Advanced Gaming Environments (SAGE) for Learning”. This four-year $3 million bilingual project includes 24 researchers and more that 20 partners, across Canada and beyond, who are studying and developing technology-mediated games and simulations. The presenter will describe several of the specific projects being undertaken, and will provide a brief demonstration of a few of these.

Simulations and Games for Learning: A New Media Form
This workshop will address the application of computer simulations and games to learning. Topics will include: (1) overview of the field; (2) examples of existing simulations and games for learning; (3) current and needed research; and (4) resources for further study. The workshop leader will report on an analysis conducted of the literature published during the past five years. Workshop participants will also play a game and a simulation and then engage in a debriefing session. Finally, the four-year $3million, SSHRC-funded project entitled “Simulation and Advanced Gaming Environments (SAGE) for Learning” will be described and a process will be outlined for participating in this international network.

NORMA SUE FISHER-STITT
Associate Professor, Department of Dance, York University

Is Any Body Home?

In this paper, the idea that we are in an age of neo-Romanticism is explored, taking elements associated with the Romantic ballet and comparing them with various contemporary life experiences, films and live performances, including Lisa Naugle’s 2003 work, NightDriving. Several observations and questions emerge, including: Is the virtual body the ultimate ethereal form?

The Romantic era was a time of rapid socio-cultural shifts initiated by the Industrial Revolution. Within the Romantic ballet the body and its meaning played a key role; the duality between the human and the non-human was a central theme, with fantastical creatures hovering above the stage in marked contrast to the earth-bound humans. A key to the portrayal of the illusion of being non-human was a new technique, pointe work, and a new piece of technology, the pointe shoe.

Katherine Hayles offers a theoretical approach to think about the role of the pointe shoe. The pointe shoe is an attached extension to the foot, thereby assuming the status of prosthesis. The pointe shoe, as prosthesis, can be seen as a harbinger of the virtual worlds that have become so popular in late 20th century and early 21st century computer games, films, and performances.

MARTIN GOTFRIT, KENNETH NEWBY + ALEKSANDRA DULIC
Martin Gotfrit, Director, School for the Contemporary Arts, Simon Fraser University
Kenneth Newby, Assistant Professor, School of Interactive Arts & Technology, Simon Fraser University
Aleksandra Dulic, PhD Candidate, Computing Arts and Design Sciences, Simon Fraser University

Current Directions in Performance and Computational Poetics

Contemporary computational techniques enable creative and performing artists to enter into new collaborative relationships with encoded systems that carry compositional and performative knowledge of artistic practices. When applied to art production and performance, computational techniques may provoke deep questions into the philosophical influences, formal characteristics and aesthetic qualities of this art. Process-oriented, interactive and computer-assisted approaches to the control and generation of audio and visual performances will be presented in the context of a variety of culturally encoded and multiply mediated performance techniques.

TORSTEN MÖLLER
Assistant Professor, Faculty of Applied Sciences, Simon Fraser University

Volume Graphics
Volume Graphics is an area of Computer Graphics dealing with points and objects made of points. This seeming lack of descriptiveness turns out to be very powerful in describing many natural and complex phenomena from weather patterns to fuel cells to our human body. Besides the creation of 2D images of complex objects the goal of Volume Graphics or Scientific Visualization at large is the creation of tools that enhance the understanding of the objects under investigation. This typically requires the user to interact with the object in real time by extracting only features of interest, creating images that are accurate and reliable.

This talk will give an overview of the research in Scientific Visualization at the Graphics, Usability and Visualization (GrUVi) Lab and an introduction to the goals of the Scientific Computing and Imaging Research Facility (SCIRF) at Simon Fraser University.

ANGELA PICCINI

PARIP Explorer: ontologies of digital knowledges in performing arts databases

In this presentation I consider ways of knowing in practice-led research at the point at which knowledges are translated through digital resources, specifically the database. There are a significant number of performing arts databases currently in existence, none of which have considered seriously the problematic of closed taxonomies in the contested field of performance. PARIP Explorer is a Semantic Web database that experiments with developing fluid webs of relationships among knowledge objects to allow for multiple, concurrent considerations of performance artefacts. It has been designed to speak alongside PARIP’s research concerns around presence and the mediatized and is grounded in the theoretical practices of the project as a whole.