

BANFF NEW MEDIA INSTITUTE

2004

Simulation and Other Re-enactments: Modeling the Unseen

April 29 – May 2, 2004

This research initiative is made possible through the support of:

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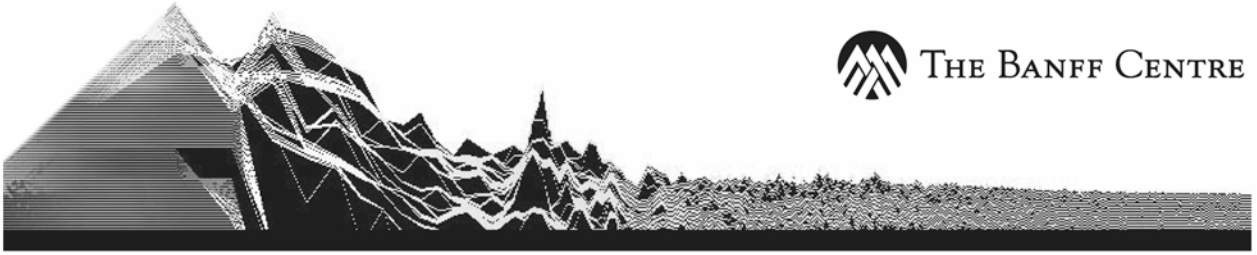
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Arts Training programs at The Banff Centre are supported by the Department of Canadian Heritage and Human Resources Development Canada through the National Arts Training Contribution Program.

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Agenda: Simulation and Other Re-enactments:
Modeling the Unseen



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THEMES AND GOALS

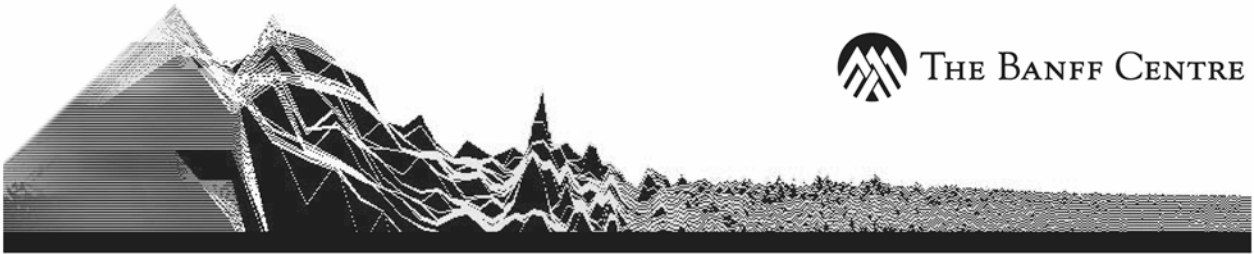
Agenda: Simulation and Other Re-enactments:
Modeling the Unseen

This cross-disciplinary event was created in order to address a series of related questions. It seeks an understanding of the ways that we understand the world through simulation-how does this enable or disable action, or consciousness?

In recent years, computer simulation has become a key strategy for representing complex phenomena within science, mathematics and society. Simulation is a growing part of cultural expression, from Matrix to Permutation City, to computer games like the Sims, to the return of historical cinema. Artists create re-enactment performances, using historical simulation, often stripped to its essential features to understand personal and larger processes. Mathematicians and physicists simulate time and space beyond the fourth dimension. Social scientists and humanists make use of simulations as research tools to analyze historical phenomena, economic processes, linguistic occurrences and practices, historical crises and crimes. Simulation scientists are dedicated to advancing the use of modeling and simulation to solve real-world problems. This requires that the researcher first build a mental and then a virtual model.

The panels, presentations, collaborations and dialogues will explore the following issues:

- *How does the use of simulation shape our understanding of complex phenomena?*
- *How can we achieve a shared understanding of a model? What are the stages of building a metaphor from phenomena? Where does the original model fit into this (artist's model or computer artifact)?*
- *How can simulations be best applied to social problems and structures? What are the social applications of simulations in promoting democracy, stimulating debate?*

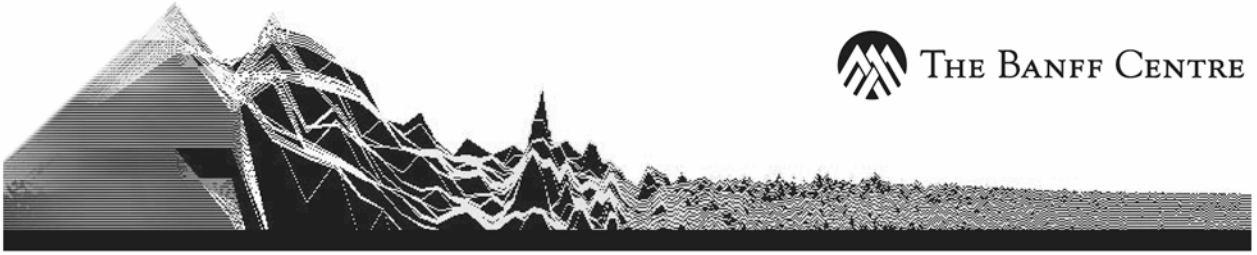


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Agenda: Simulation and Other Re-enactments:
Modeling the Unseen

- *How can we meaningfully express the scale of the unseen? How can we express infinite/minute scales? Can simulation help to blend scales of simulation?*
- *If scientific realism is powerful because of its realism, then what is powerful about artistic recreation?*
- *How can simulation extract the unseen from language? What might these approaches tell us about an original, non-linguistic model?*
- *What are the aesthetics of simulation? Is data expressive? Is realism and reality the goal of all simulations, of some? How can simulation be used in prediction? Can results be compared against know real-world observations? What simulation media are appropriate for specific phenomena?*
- *How do we understand the new, hybrid, simulations that link the digital to the biological, or which are biological? Can and should we simulate the human body or mind?*
- *Are we living in a simulation? How do simulations and the unseen shape our sense of space and time within physical reality? How do simulation games operate as experiences? Do participants understand the game as another reality?*
- *What have we learned about how we understand the world through simulation—how does this enable or disable consciousness? What are the limits and failures of simulation?*



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AGENDA

Sara Diamond, Executive Producer, TV & New Media, Artistic Director, Media and Visual Arts, The Banff Centre, will moderate or co-moderate all sessions.

Wednesday, April 28th

8:30pm

Meet and Greet

Location: The Cozy Nook, The Sally Borden Building, The Banff Centre

Come have a drink – we can re-enact our first encounters later on in the workshop.

Thursday, April 29th

8:00am – 9:00am

Technical Run Through

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

ALL PRESENTERS FOR THE DAY MUST ATTEND - see technical run through schedule for times

9:00am – 9:45am

Welcome and Introductions

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

Kick off talk and discussion: Why this workshop? What are some of the key concepts and questions? What is the process of the workshop?

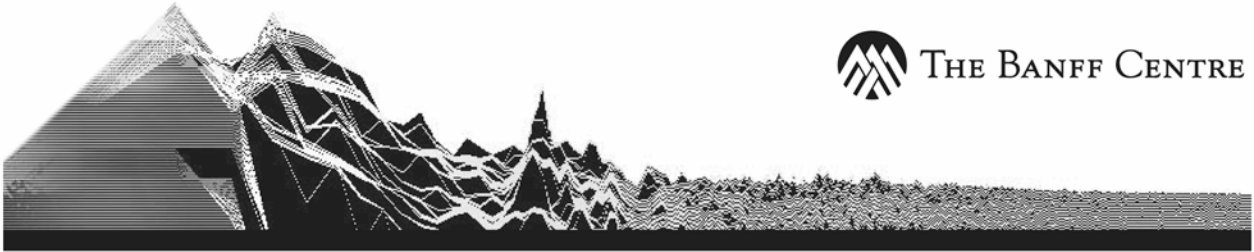
- **Sara Diamond** – Director of Research, Executive Producer, TV & New Media, Artistic Director, Media and Visual Arts, The Banff Centre

9:45am – 11:15am

How can simulations be best applied to social problems and structures? What are the social applications of simulations in promoting democracy, stimulating debate?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

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- **Jonathan Drori** - Director, Culture Online, Department of Culture UK Government
Managing Director - *Comments on the ways that simulations are understood in popular cultures such as science, television and education*
- **Nigel Gilbert** - Pro Vice-Chancellor and Professor of Sociology, University of Surrey – *Solving Social Issues, Collaborative Design and Stakeholder Participation: The Zurich Water Game, music market simulations; comparison with NEW TIES Project, and agent based simulation of society building.*
- **Elizabeth Bruch** – Graduate Student, Department of Sociology and Statistics University of California - *Neighborhood Choice and Neighborhood Change: Modeling segregation and neighborhood change—understanding residential segregation by race and income, dynamic models of neighborhood change, relationship between individual-level behavior and population processes, analysis of stated and revealed choice data*
- **Nina Wakeford** - Director, INCITE, University of Surrey - *“Channeling the User”: The politics of simulation, in particular the use of “Culture” in narratives about social simulation. The ethics and methods of speaking for others.*

11:15am - 11:30am
BREAK

11:30am – 1:00pm

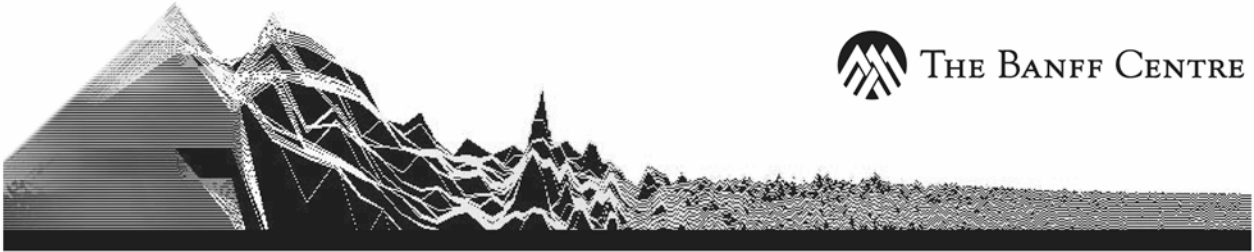
How can we meaningfully express the scale of the unseen? How can we express infinite/minute scales?

Location: Rice Studio, The Jeanne and Peter Loughheed Building (JPL)

- **David Wishart** - Associate Professor, University of Alberta - *Seeing the Unseeable, the Science Behind Cellular Simulation*
- **Gloria Brown Simmons** - Artist and Aesthetic Engineer and Research Affiliate Massachusetts Institute of Technology - *Transport at Different Scales—linking personal space to global space re: pollution, through the butterfly metaphor—creating a cross disciplinary team context*

1:00pm – 2:15pm

LUNCH ***please note: last service in the dining room is at 1:30pm***



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Agenda: Simulation and Other Re-enactments:
Modeling the Unseen

2:15pm – 3:00pm

Game Grid Demo, University of California, Irvine and UC San Diego

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Celia Pearce** - External Relations Manager, Media Arts, Cal-(IT)2 and Associate Director, Game Culture & Technology Lab, University of California, Irvine
- **Robert Nideffer** - Professor, Studio Art & Information and Computer Science University of California Irvine

3:00pm – 4:30pm

How can we achieve a shared understanding of a model? What are the stages of building a metaphor from phenomena? Where does the original model fit into this (artist's model or computer artifact)?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Katrin Becker** - Senior Instructor, Department of Computer Science, University of Calgary - *Cross Disciplinary Simulations: How can we communicate mental models between communities - concepts and tools*
- **Pierre Boulanger** - Professor, Department of Computing Science University of Alberta – *The ANIMUS project: synthetic characters – modeling human-like agents from biological organisms for virtual environments*
- **Brad Paley** – Founder, Digital Image Design Inc. Adjunct Associate Professor, Columbia - *The Knowledge Acquisition Pipeline – bringing sensation and perception to designing visualizations – representing data as human communication*

4:30pm – 4:40pm

BREAK

4:40pm – 6:00pm

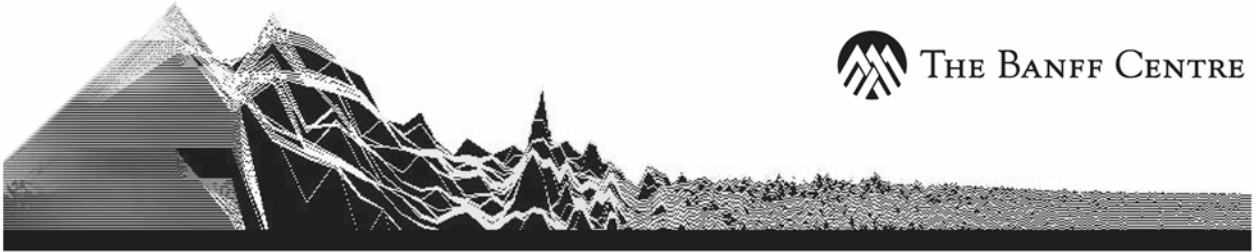
Simulation Brainstorm: Summary of ideas for workshop simulation. What's been built so far? What can we do while at Banff and why? Develop process of creating simulation. Check in on what has been built to date

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Maria Lantin** – Visualization Researcher, Banff New Media Institute

6:00pm – 7:00pm

DINNER



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Agenda: Simulation and Other Re-enactments:
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7:00pm – 8:30pm

FREE TIME

You may want to use this time to visit the artworks in Sarah Cook's exhibit in JPL 204. The exhibit will run the entire duration of the summit

8:30pm – 10:15pm

An Evening with Sarah Cook (wine and beer will be available)

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

Curator Sarah Cook will discuss contemporary artistic re-enactment projects from the UK and relate the artists' practices to the key questions from the workshop. Featuring projects by Jeremy Deller, Rod Dickinson, Iain Forsythe and Jane Pollard, Nina Pope and Karen Guthrie, Marcus Coates and others, the works will be available for viewing throughout the summit in JPL 204.

Friday, April 30th

8:00 am – 9:00 am

Technical Run Through

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

ALL PRESENTERS FOR THE DAY MUST ATTEND - see technical run through schedule for times

9:00 – 9:15

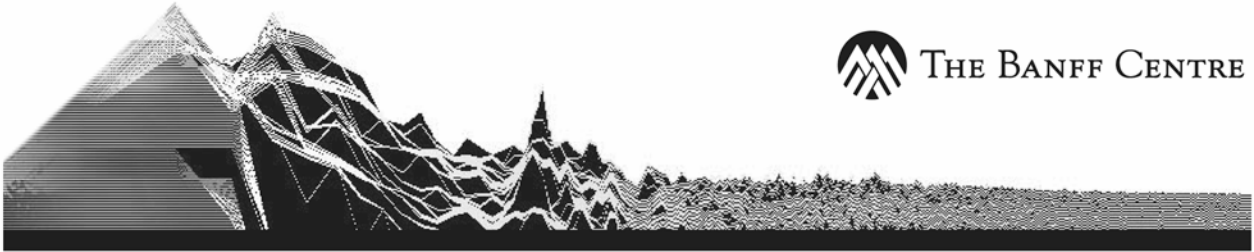
Review of Day 1 – Sara Diamond

9:15am – 10:30am

How do we understand the new, hybrid, simulations that link the digital to the biological, or which are biological? Can and should we simulate the human body or mind?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Mark d'Inverno** – Professor, Cavendish School of Computing, University of Westminster and Musician - *The CELL Project: modeling and simulation of stem cells between art and science*
- **Ted Krueger** - Associate Professor of Architecture Rensselaer Polytechnic Institute -*Synthetic Sense Modalities - scientific visualization and scientific perceptualization*
- **Jaanis Garancs** - *Artist, RIXC, Riga Center for New Media Culture - Simulacrum Populi, the 'meta-molecule' as the 'mediator' of human presence; Metaspongia:*



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establishing flux of "audiovisual cells " in its "contextual space tissues". Locative Media Lab: visualizing a 'landscape' of 'locative packets', generated by mobile participants.

10:30am – 10:45am
BREAK

10:45am – 12:15pm

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

Are we living in a simulation? How do simulations and the unseen shape our sense of space and time within physical reality? In particular, how do simulation games operate as experiences? Do participants understand the game as another reality?

- **Celia Pearce** - External Relations Manager, Media Arts, Cal-(IT)2 and Associate Director, Game Culture & Technology Lab, University of California, Irvine
- **Emma Westecott** - Studio Director, Zero-Game Studio, The Interactive Institute - *The active nature of the game and the construction of other subversive realities*
- **Jim Parker** - Professor, Computer Science Department University of Calgary - *CyberGameSpace - Visualizing the Unreal*
- **Pasi Pirttiaho** - Production Advisor, POEM, POEMdigit / POEMshorts – *Respondent*

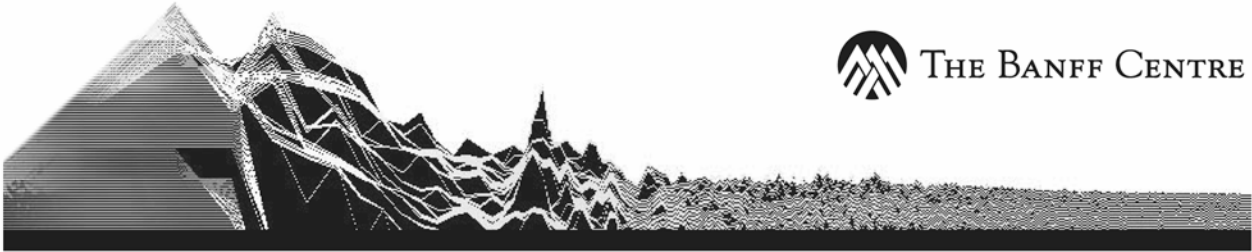
12:15pm - 1:15pm
LUNCH

1:15pm – 3:15pm

Is realism and reality the goal of all simulations, of some? How does the suspension of disbelief operate in a simulation? How do agency, character, fantasy operate in games and animation?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

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- **Robert Nideffer** - Professor, Studio Art & Information and Computer Science University of California Irvine - *Separating simulation from realism - biases and potentials in the physics and narratives of game design*
- **Eric Brochu** - Graduate Student, Department of Computer Science, University of British Columbia - *Frail and realistic agents: Learning from humans*
- **Ken Perlin** - Professor, Department of Computer Science, New York University, NYU Media Research Lab - *Graphics intelligence and artificial characters*
- **Warren Sack** - Software Designer and Media Theorist, Film & Digital Media Department, University of California - *Plato versus the Sophists: is mimesis a good thing? Plus: the aesthetics of information visualization*

**3:15pm - 3:30pm
BREAK**

3:30pm – 6:00pm

How should simulation be used to map improbability? How does the use of simulation shape our understanding of complex phenomena? What are the aesthetics of simulation?

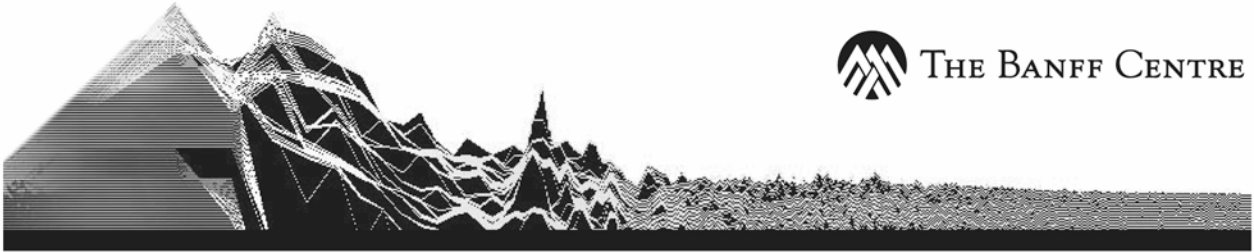
Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Christian Jacob** - Associate Professor, University of Calgary, Dept. of Computer Science - *Agent-based simulations of swarm intelligence systems, creating the art of human phenomenon*
- **Julie Tolmie** - Visiting Faculty, Computer Science, Dalhousie University and Assistant Professor, SIAT, SFU Surrey - *Using simulation and advanced gaming environments for exploring and encoding concepts that are not easily accessible and/or constrained by space/time language*
- **Guy Hundere** - Independent Artist - *Simulating the impossible and blending the simulated and the physical; the aesthetic outcomes of mixed realities constructs. Works include Impasse 2001, with its "simultaneous experience of traveling and standing still" and Ornithmancy, 2003, an animation of over 200 747 Jumbo Jets encircling each other in a chaotic but organic pattern.*

**6:00pm – 7:00pm
DINNER**

**7:00pm – 8:00pm
FREE TIME**

*****You may want to use this time to visit some of the artworks in Sarah Cook's exhibit in JPL 204. The exhibit will run the entire duration of the summit*****



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8:00pm – 9:30pm

Paul Wong and Sara Diamond: Intensities (wine and beer will be available)

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

Artists have drawn on re-enactment as a way of embodying and hence understanding personal and social histories. Artist/curators Wong and Diamond will fast forward through their own and other artists' re-enactment performance videos and simulation works, beginning with early practice in the 1970s to their recent collaboration in and around the CodeZebra Habituation Cage performance, DEAF Festival 2003, using CodeZebra visualization tool (demo running for workshop), video streaming and live performance—a collaboration simulation.

- **Paul Wong** – Artist
- **Sara Diamond** - Director of Research, Executive Producer, TV & New Media, Artistic Director, Media and Visual Arts, The Banff Centre

9:30pm – 10:45pm

Simulations in the CAVE/A.R.T Lab and participation in simulation building

Location: The A.R.T. Lab, Basement of The Jeanne and Peter Lougheed Building (JPL)

Visit The Cave with Maria Lantin and explore our Advanced Research and Technology (A.R.T) Lab and some of the simulations that workshop participants have brought. See the simulation the team has created to date.

- **RACOL Science Games**, The Banff Centre
- **Marc d'Inverno** - Intelligent Responsive Sound
- **And others!**

Saturday, May 1st

8:00 am – 9:00 am

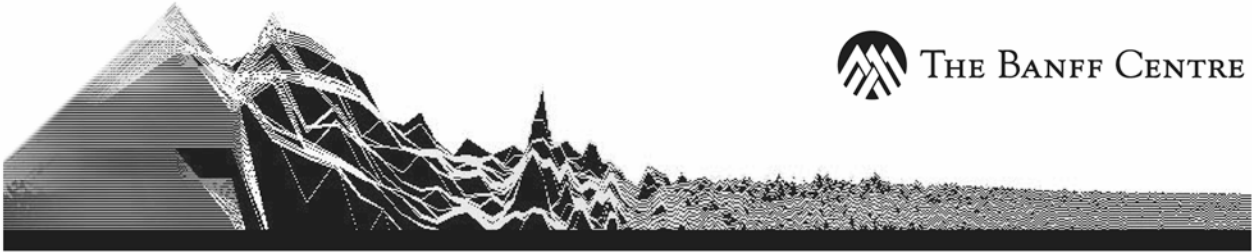
Technical Run Through

Location: Rice Studio The Jeanne and Peter Lougheed Building (JPL)

ALL PRESENTERS FOR THE DAY must attend - see technical run through schedule for times

9:00 – 9:15am

Review of Day 2 – Sara Diamond



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9:15am – 9:30am

PART 2: How can we meaningfully express the scale of the unseen? How can we express infinite/minute scales?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **John Dubinski** - Department of Astronomy and Astrophysics, McLennan Lab, University of Toronto - *Time/Space, time scales and supercomputing - N-body simulations of galaxies*

9:30am – 10:30am

What have we learned about how we understand the world through simulation - how does this enable or disable consciousness?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Machiko Kusahara** - Ph.D., Media Scholar / Media Art Curator School of Letters, Arts and Sciences, Waseda University - *Simulation and youth culture, across cultures. Degrees of realism and the suspension of disbelief.*

10:30am – 10:45am

BREAK

10:45am – 12:15pm

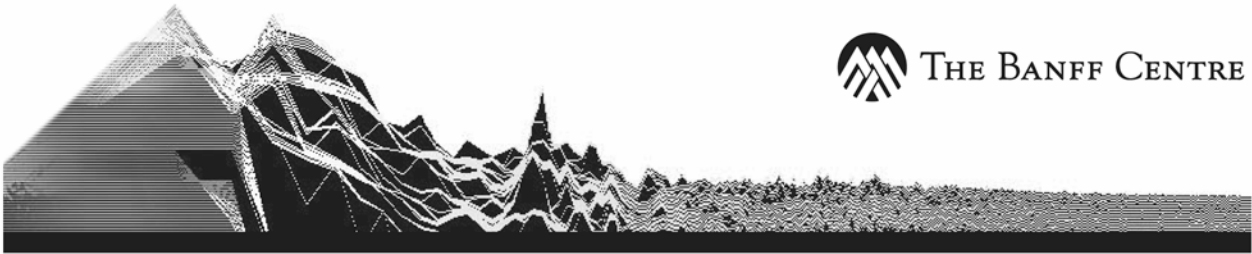
If scientific realism is powerful because of its realism, then what is powerful about artistic re-creation? What simulation media are appropriate for specific phenomena?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Kris Cohen** - Research Fellow University of Surrey, and **Ben Coode-Adams** - Artist - *Blending art and ethnography in the creation of new research methods*
- **Jennifer Steinkamp** - Artist - *Architectural space, motion, and phenomenological perception. In the work entitled In The Wreck of the Dumaru, she combines re-enactment and simulation*
- **Chris Creighton-Kelly** - Artist - *Performing memory: performance as ephemeral and visceral, direct, in-the-same-place-as-other-bodies, but also meandering. It can create, without much trace of objects, a sense of memory*

12:15pm - 1:15pm

LUNCH



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1:15pm – 2:15pm

How can simulation extract the unseen from language? What might these approaches tell us about an original, non-linguistic model? What are the aesthetics of data?

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

- **Radan Martinec** - The London Institute - *Creating multimedia products from visualizing the semantic patterns of texts. Using the translation metaphor in understanding visualization*
- **Sheelagh Carpendale** - Assistant Professor University of Calgary, Department of Computer Science - *From Scientific to Artistic simulation and visualization, come conclusions of scope*
- **Mark Hansen** - Associate Professor Department of Statistics and Design/Media Arts - *Comments*

2:15pm - 2:30pm

BREAK

2:30pm - 3:45pm

How can simulation be used in prediction? Can results be compared against known real-world observations? How do we evaluate the model?

Location: The Jeanne and Peter Lougheed Building (JPL)

- **Marc Rioux** - Principal Research Officer, Institute for Information Technology - *Visualization and Simulation—scientific tools*
- **Kris Cohen**, *Research Fellow*, University of Surrey and **Maria Lantin**, Visualization Researcher, Banff New Media Institute - *comments*
- **Mark Hansen** - **Associate Professor Department of Statistics and Design/Media Arts - *Simulation-based Inference***
- **Nina Wakeford** - Director, INCITE, University of Surrey
- **Mark d’Inverno** - Professor, Cavendish School of Computing, University of Westminster and Musician

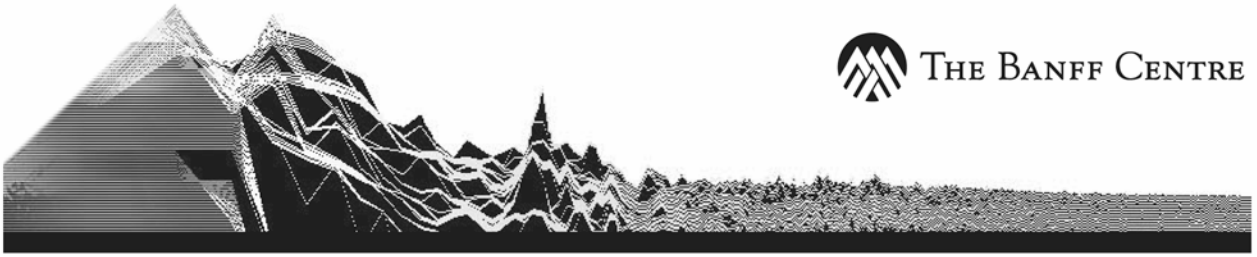
3:45pm - 5:30pm

What are the key questions for the summit to date?

Location: The A.R.T. Lab, Basement of The Jeanne and Peter Lougheed Building (JPL)

This is working time for the simulation team in the A.R.T. lab. Drop by the lab, hang out in the simulation space.

5:30pm - 6:30pm

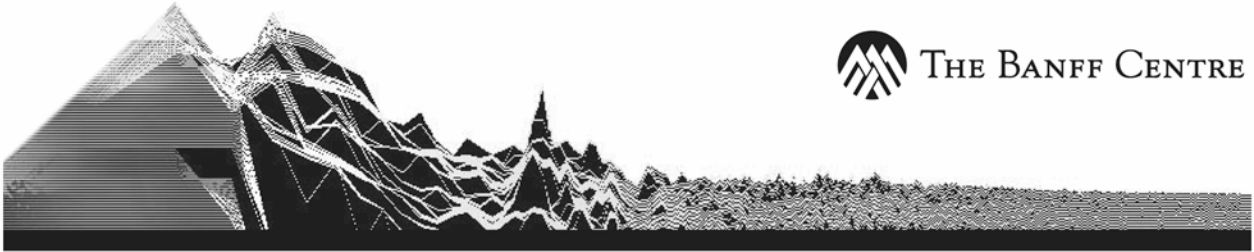


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DINNER

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6:30pm - 7:30pm
FREE TIME

7:30pm – 8:30pm

Curator Candice Hopkins discusses the re-enactment work of Zacharias Kunuk

Location: First Floor Hallway, The Jeanne and Peter Lougheed Building (JPL)

- **Candice Hopkins** - Aboriginal curatorial resident at the Walter Phillips Gallery - Candice will discuss Kunuk's thirteen part video series, *Nunavut: Our Land*, currently in the Walter Phillips Gallery exhibit called *A Question of Place*. This work recreates Inuit life in the mid 1940s, a time when age-old nomadic traditions were brushing up against government and settlement life.

9:00pm

BUS DEPARTURE FOR SARA DIAMOND'S HOUSE IN CANMORE

- **Bus leaves from in front of Lloyd Hall at 9:00pm sharp!**
- Bus will stop at the liquor store so we can get some beverages.
- No shoes in the house (nice socks!), but do bring a comfy pair of shoes as we will go for a walk to the river.
- Bus will return at 12 midnight and at 2:00am

9:00pm - Midnight

A Real Home: Night of relaxed conversation and stroll to the river...bring walking shoes!

Sunday, May 2nd

9:30am – 11:30 am

Walk off the night before (whatever the weather, we will walk)

Location: Meet at Rice Studio The Jeanne and Peter Lougheed Building (JPL)

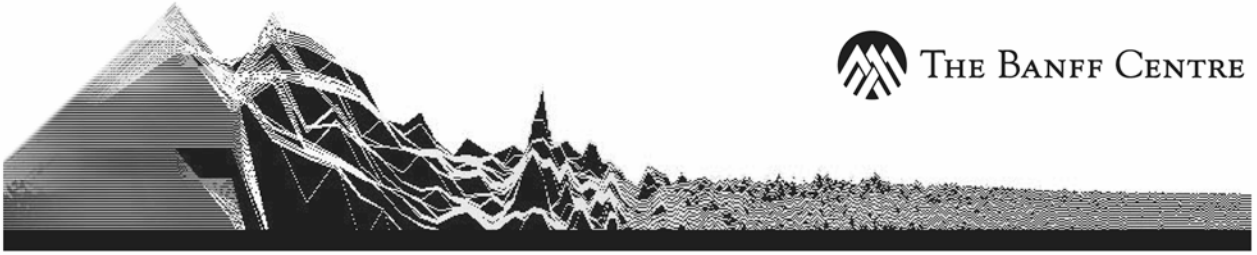
OR

11:00am -11:30am

******You want to visit artist Skawennati Fragnito's CyberPowWow. The event will run until May 2nd******

Location: The Other Gallery, 2nd floor Glyde Hall

The public are invited to join the simultaneous, distributed, interactive internet event known as CyberPowWow 04. Community members will log into a combination



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chatspace, virtual gallery and library that explores issues of contemporary Aboriginal art, technology and community. For the fourth event (since 1997) in this ongoing series we ask: What does it mean to claim territory in cyberspace? What are the natural resources of such territory? Can they be exploited? Is cyberspace really infinite? How much can it escape the finite world of wires in the ground, access to computing power, and entrenched modes of thinking? Invited artists will use their intimate knowledge of some of the unnatural resources we have determined so far —data, pixels, bandwidth, computing power, networks, access, and attention— to create web-based works that will be launched during CPW04.

- **Skawennati Fragnito** - Artist, writer and independent curator (not here for this event)

11:30am – 12:30 am

Research Day! View of workshop simulation and discussion

Location: Rice Studio, The Jeanne and Peter Lougheed Building (JPL)

12:30pm – 1:30pm

LUNCH

1:30pm - 5:00pm (Break at 3:30pm)

Small group and large group discussion of conclusions from questions for workshop. Future collaboration – what, why and how

Location: Rice Studio The Jeanne and Peter Lougheed Building (JPL)

5:00pm – 5:30pm

Evaluation of the event

5:30pm – 6:45pm

Closing reception

Location: 3rd Floor Balcony, The Jeanne and Peter Lougheed Building (JPL) weather permitting

6:45pm - 7:30pm

DINNER