

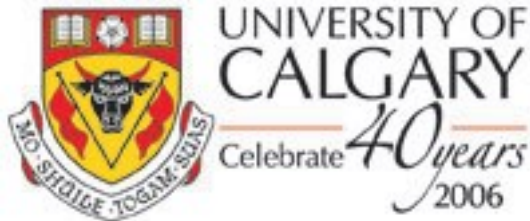
ASTECS: A COURSE IN ART, SCIENCE AND TECHNOLOGY

ASTECS is a year long, inquiry based Art and Computer Science course. This interdisciplinary course will develop such skills as graphics, human-computer interaction, interaction design, visualization, representation, perception, and aesthetics to investigate different modes of inquiry into creative practice at the intersection of art and computer science. This research/creation course will result in a research project and paper, and a project exhibition.

This is a tri-institution course involving the Banff Centre for the Arts, the Alberta College of Art & Design, and the University of Calgary.



ALBERTA COLLEGE OF ART + DESIGN



The Banff Centre
inspiring **creativity**

OVERVIEW

The initial workshop week, September 5th to 8th 2006, will take place at the Banff Centre for the Arts.
September 12th through December 7th 2006, AStecs will meet every Tuesday and Thursday 9:30 to 12:30.
The second workshop week, January 2nd to 5th 2007, will take place at the Banff Centre for the Arts.
January 9th through April 12th 2007, AStecs will meet every Tuesday and Thursday 9:30 to 12:30.
September 2006 through April 2007, alb space will be available at Alberta College of Art & Design.

Professors

Jeff Boyd, computational vision
Sheelagh Carpendale, information visualization and interactive technologies
Alan Dunning, new media arts
Katayoon Etemad, computationally generating design and pattern
Mary Scott, literary interpretation and critique of pedagogy, gaming
Paul Woodrow, new media arts

website: innovis.cpsc.ucalgary.ca/AStecs/

SENIOR ARTIST BIOGRAPHIES

Boyd, Jeff

Jeff Boyd is currently an associate professor in the Department of Computer Science at the University of Calgary. His research interests include computer vision, image processing, video, optical flow, motion recognition, and interactive art. Jeff Boyd completed his PhD in the Computer Science Department at the University of British Columbia in 1994. He completed his BSc and MSc in Electrical Engineering at the University of Calgary in 1983 and 1986 respectively. From 1996 to 1997 Jeff held an NSERC postdoctoral fellowship while he studied at the Visual Computing Laboratory at the University of California, San Diego. He was previously at the Visual Computing Laboratory at the University of California, San Diego, TRIUMF, and the Department of Computer Science at the University of British Columbia.

Carpendale, Sheelagh

Sheelagh Carpendale holds a Canada Research Chair (CRC) in Information Visualization at the University of Calgary. She is the recipient of several major awards including the NSERC University Faculty Award and the British Academy of Film and Television Arts Award for Off-Line Learning (BAFTA). Currently her best known research is tabletop interaction, although her work in elastic presentation has been the strategic focus of Idelix Software Inc. (a Canadian based spin-off venture). Her research focuses on the visualization, exploration and manipulation of information and includes: visualizing ecological dynamics for SEED (Simulating and Exploring Eco-system Dynamics) and a Braunart's project, Antarctic Waves, that uses visualization to integrate scientific results and sounds from Antarctica to create a tool to inspire musical composition. Dr.Carpendale's research in information visualization and interaction design draws on her dual background in Computer Science (BSc. and Ph.D. Simon Fraser University) and Visual Arts (Sheridan College, School of Design and Emily Carr, College of Art). <http://innovis.cpsc.ucalgary.ca/>

Dunning, Alan

Alan Dunning is a new media artist and was the first Chair of ACAD's interdisciplinary Media Arts and Digital Technologies program. Since 1980 he has exhibited in more than 100 shows in Canada, USA, South America, Asia and Europe, as well, more than 100 catalogues, reviews and articles have referenced his work. Media features have included CNN, The Discovery Channel and CBC's underground music show Brave New Waves. He has received major awards from the Canada Council, La fondation Daniel Langlois, the Social Sciences and Humanities Research Council and the Association of Commonwealth Universities. Since 1996, he has been part of the collaborative team of scientists and artists developing the art and science work, the Einstein's Brain Project, a work dealing with consciousness, embodiment and virtuality. The project has been nominated for both the Wellcome Trust's Sci/Art prize, and the \\international\media\award for science and art. The project's work is featured in Mark Hansen's "New Philosophy for New Media" (MIT Press 2004), and Katherine Hayles' "Flesh and Metal: Reconfiguring the Mindbody in Virtual Environments" in "Semiotic Flesh: Information and the Human Body" (University of Washington Press 2002), in "Technoetic Arts", (Intellect, 2005), in "State of the Real", (I.B. Tauris, 2005), and in Anna Munster's "Materializing New Media: Embodiment and Information Aesthetics" (University of New England Press, 2006). Alan Dunning is represented internationally, including the National Gallery of Canada and Museum of Modern Art, New York. <http://www.ucalgary.ca/~einbrain/>, <http://www.ucalgary.ca/~einbrain/BDZ/bdz.html>, <http://www.fondation-langlois.org/html/e/page.php?NumPage=44>

Etemad, Katayoon

Katayoon Etemad joined the MADT Sessional Faculty in January of 2006. She graduated from Sharif University of Technology, the most prominent engineering and scientific university of Iran in 1993. Katayoon has more than 8 years of teaching and work experience in the area of programming and graphics software. She is currently working on algorithmic generation of symmetric patterns, in particular, the Islamic star-like 3D patterns (Muqarnas). This is a follow up of her previous works on designing 2D ornaments and floral patterns. To generate these decorative objects (see Figure 1 and 2), she employs various software tools such as Maya, 3D Max, and L-studio. This semester Katayoon is teaching Introductory 3D Animation.

INITIAL BLOCK WEEK WORKSHOP OULINE (SUBJECT TO CHANGE)

TUESDAY SEPTEMBER 5 – DAY ONE

Course Introductions

10:00am - 10:30am

JPL 204

Hand out course outlines. Review purpose of course, format of course, purpose of workshop, format of workshop etc. Talk about being 'doers' etc.

Alan Dunning. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

Paul Woodrow. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

Sheelagh Carpendale. *Professor, Information Visualization and Interactive Technologies, University of Calgary*

Existence of Assumptions

10:30am - 11:30am

JPL 204

- **1st paired exercise** – 20 minutes create an annotated sketch of an artist that you believe the group will recognize as an artist.

- **2nd paired exercise** – 20 minutes create an annotated sketch of a scientist that you believe the group will recognize as such.

- As a whole group – organize and re-organize sketches according to what they say to us – with further annotations and group discussion on assumptions.

Allowing 1 hour for this – the times shown above are not intended to be exact in fact I would think the we should keep the sketch time pretty short – maybe only 10 minutes – if it is short enough people are less likely to get up-tight about doing it properly – it is more likely to be taken in a light hearted manner.

Effect of Assumptions

11:30am - 12:00pm

JPL 204

A discussion and how labels influence behaviour. Have an informal discussion about our own assumptions and how they might interfere with our collaboration and what we think we might do to handle this and how this relates to the goals of this course. Take time during this time for everyone to state their own personal goals for this course.

Lunch

12:00pm - 1:30pm

Main Dining Hall

Introduction to the Banff Centre and the Banff New Media Institute

1:30pm - 3:00pm

JPL 204

Room Check-In / Coffee Break

3:00pm - 3:30pm

JPL 204

Representation in Art

3:30pm - 5:00pm

JPL 204

Seminar and discussion.

Paul Woodrow. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

Dinner

6:30pm - 8:30pm

Main Dining Hall

Exercises

8:30pm – 10:30pm

JPL 204

- **3rd paired exercise:** creating a comprehensible visual representation of a mathematical concept. Drawing of hypercubes

5 mins explanation
20 mins drawing
5 mins discussion

Sheelagh Carpendale. *Professor, Information Visualization and Interactive Technologies, University of Calgary*

- **4th paired exercise:** A line on a walk. Based on Paul Klee.

5 mins explanation
20 mins drawing
5 mins discussion

Alan Dunning. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

WEDNESDAY SEPTEMBER 6 – DAY TWO

Issues in Art/Science Collaborations

9:00am – 10:30am

JPL 204

Group Discussion. Topics will include: visual thinking, art and science possibilities, interdisciplinary collaboration.

Alan Dunning. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

Coffee Break

10:30am – 11:00am

JPL 204

Exercises

10:30am – 12:00pm

JPL 204

- **5th paired exercise:** creating a comprehensible visual representation of a mathematical concept. Drawing of hierarchies

- 5 mins explanation
- 20 mins drawing
- 5 mins discussion

Sheelagh Carpendale. *Professor, Information Visualization and Interactive Technologies, University of Calgary*

- **6th paired exercise:** Paranoiac-Critical Method. The ambiguity of images – Alan Dunning

- 5 mins explanation
- 20 mins drawing
- 5 mins discussion

Alan Dunning. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

Lunch

12:00pm – 1:30pm

Main Dining Hall

Afternoon Overview

1:30pm – 5:30pm

JPL 204

Remember ****Initial Presentations****

To develop the collaboration we need a rich exchange of information between ourselves. Each of you is expected to make a presentation to the group. This can be quite informal, but should show current and past work and should demonstrate your interests and experience. The presentations can consist of video, stills, applications, etc and should be between 5 and 10 minutes in length. Please let us know in advance what resources you will need to make your presentations. Everyone will do one. These are welcome to be shorter than 10 minutes but can not be longer. We will do 6 and then take a 20 minute break and repeat until done.

- 1:30 – 2:30pm - first 4 presentations
- 2:30 – 2:50pm - 20 minute break – for discussions, slippage etc.
- 2:50 – 3:50pm - second 4 presentations
- 3:50 – 4:10pm - 20 minute break – for discussions, slippage etc
- 4:10 – 5:10pm - 3rd set – 4 presentations
- 5:10 – 5:30pm - discussions

Dinner

5:30pm – 8:30pm

Main Dining Hall

Exercises

8:30pm – 10:30pm

JPL 204

- **7th paired exercise:** using drawing to solve a mathematical problem. Visibility and the 'Art Gallery Problem'.

- 5 mins explanation
- 20 mins drawing
- 5 mins discussion

THURSDAY SEPTEMBER 7 – DAY THREE

Partnership Announcements

9:00am – 9:15am

JPL 204

Seminar: Practical Issues in Collaboration

9:15am – 10:30am

JPL 204

Coffee Break

10:30am – 11:00am

JPL 204

Lecture

11:00am – 12:00pm

JPL 204

Images and Meaning How can we know what images mean?
The Secret World of Drawings

Alan Dunning. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

'State of the art' – Information Visualization

Sheelagh Carpendale. *Professor, Information Visualization and Interactive Technologies, University of Calgary*

Lunch

12:00pm – 1:30pm

Main Dining Hall

Group Hike

1:30pm – 5:30pm

TBD

Dinner

5:30pm – 8:30pm

Main Dining Hall

Shared Vocabulary Discussion and Idea Generation

8:30pm – 10:30pm

Main Dining Hall

Possibilities for collaboration.
Generate lists of skills, interests, research, etc., required.

FRIDAY SEPTEMBER 8 – DAY FOUR

Art as Research / Information Visualization as Art

9:00am – 9:45am

JPL 204

Art as a mode of inquiry.

Does contemporary art need to incorporate the sciences. Do the sciences truly 'need' the arts?

How can an expressive medium inform an empirical field?

You will now be in partnerships – think how these relate to your work together. Group discussion.

Alan Dunning. *Professor, New Media Arts, Alberta College of Art and Design, Calgary*

Coffee Break

10:15am – 10:45am

JPL 204

Shared Vocabulary Discussion

10:45am – 12:00pm

JPL 204

Discuss words that arose on Thursday, define in art voice, in science voice and in our collaborative voice.

Lunch

12:00pm – 1:30pm

Main Dining Hall

Partners Presentations

1:30pm – 2:30pm

JPL 204

15 minutes each. Explain how you plan to collaborate. We not at this point expect you to have firmed up what your project will be but we do expect a plan of how you will work together. This should include: locations, times, methods, division of labour.

Coffee Break

2:30pm – 3:00pm

JPL 204

Wrap- Up and Final Shared Vocabulary Session

3:00pm – 5:00pm

JPL 204

Discuss words that have arisen, define in: art voice, science voice and in our collaborative voice.

Discussion about this initial workshop.

Plans for the rest of the course.