

SCHOOL OF INTERACTIVE ARTS + TECHNOLOGY

research // projects

Sample Projects

Tangible game-building: bridging the gender gap in computing [Seif el-Nasr]

Mindful Games: Comparing Evaluation Methods [Antle]

Synthesis of Historic Keyboard Instruments [Bowes]

[North House: Solar Powered House \[Bartram, Woodbury\]](#)

Evaluating Embodied Interaction [Antle]

MusicianMap [Shaw]

Enjoyment and Engagement in Tangible Spatial Games [Antle]

Memnonic Variations [Filimowicz]

Visual Analytics for Safety and Security [Fisher]

ec(h)o-VUE [Wakkary, Hatala]

Beatniks: Investigating Orientational and Ontological Metaphors in Embodied Interaction (aka the Musical Interface Study) [Antle]

HOT Admin: Human, Organization, and Technology Centred Improvement of the IT Security Administration [Fisher]

Information Systems for Skilled Cognition & Communication [Fisher]

LORNET: Learning Object Repository Networks [Hatala]

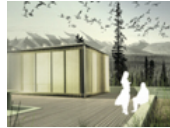
Ambient Video [Bizzochi, Youssef]

Interactive Multigenomic Analysis System [Shaw]

iVizLab (Interactive Visualization Lab) [DiPaola]

SAGE: Simulation and Advanced Gaming Environments for Learning [Bizzochi, Calvert, DiPaola]

The Whispers Project [Schiphorst]



Faculty Lead: [Lyn Bartram](#) , [Rob Woodbury](#)

Project Collaborators: Ron Wakkary (past collaborator)

North House: Solar Powered House [Bartram, Woodbury]

VIEW THE BOOK HERE:

Flash: www.morethangreen.org/northhouse/

PDF: www.morethangreen.org/northhouse/NorthHouse.pdf

WATCH THE VIDEOS HERE:

<http://www.youtube.com/watch?v=LqwCRpkIVXQ&NR=1>

http://www.youtube.com/watch?v=mwcMs_V3XqM&feature=related

[Download CDRN Press Release Here](#)

[Read the Granville Magazine article here](#)

Students and faculty from Simon Fraser University's School of Interactive Arts and Technology (SIAT) join with colleagues from the University of Waterloo and Ryerson University to design a high-tech, solar-powered house. The house will join others on The Mall in Washington, DC, as part of the US Department of Energy's Solar Decathlon.

The building, NORTH HOUSE, will be entered in the 2009 Solar Decathlon, where it will compete against houses designed by 19 other North American universities.

Each of the three universities brings something unique to the project. Waterloo is leading the project and concentrating on off-grid housing and responsive structure and "skin". Ryerson will contribute energy modeling and analysis, while SFU will develop an "adaptive living interface" that allows the house's occupants to adjust energy settings easily through touch controls built into the walls or remotely via cellphone and computer. Reflecting its strengths in design, SIAT will create publicity materials, including a website, interpretative signage and a graphic identity for the project.

The U.S. Department of Energy and the National Renewable Energy Laboratory are using the Decathlon to encourage the broad adoption of sun-powered homes. The entrants will be presented to the general public in a "solar village" outside the Smithsonian Institution in Oct 2009. Team North, as the SFU/Waterloo/Ryerson co-operative is called, hopes that NORTH HOUSE will then be displayed at the 2010 Winter Olympics in Vancouver.

Leading SIAT's efforts will be professors [Lyn Bartram](#) and [Rob Woodbury](#). Bartram is an assistant professor in SIAT whose research interests span visualization and human-computer interaction. She has a background in user interfaces for control systems and a current interest in how this might translate to residents engaging with their personal living spaces that is motivated by her own experience in owning a solar-powered house. She is a co-director of the hviLab (humans, visualization and interfaces). Woodbury, the scientific director for the Canadian Design Research Network, heads the advisory committee for Team North. SIAT faculty Ron Wakkary is also recognized for his valuable contributions.

The project's outcome will be viewed by more than 300,000 people at the Solar Decathlon event and potentially by many more in its permanent display location (the location is under negotiation). North House is an exciting project to raise funds and opportunities for students. Team North is negotiating with a major Canadian company for financial support

and student internships. Students active in the project will experience a complex and highly visible design effort, gain experience valuable to future employers and perhaps shape future careers in sustainable design.

SIAT will integrate the project into a fourth-year interdisciplinary course and is also proposing new undergraduate and graduate courses in sustainable design.

The following are SIAT students involved in this project:

SIAT Graduate students:

Davis Marques

Karen Tanenbaum

Kevin Muise

Jason Boileau

Roham (Mehdi) Sheikholeslami

SIAT Undergraduate Students:

Simon Kwok

Jin Fan

Christine Poh

Project Status: In Progress

Start Date: January 1, 2008