

Bringing Game Research to the Real World

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and

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Motivation

What are we doing?

- Empirical research and technology prototyping of Computer Games and Virtual Worlds that support challenge problems in science, health care, art, technology and defense studies.

Why are we doing this?

- Computer games are both *technology* and *new media*
 - An opportunity area for research and innovation in playful socio-technical systems
- Enable immersive and transformative experiences that facilitate learning through R&D, play and failure experiences
- Engage new students and emerging scholars

Some game projects of interest

- Science learning games for informal science education at regional science museums
- Game-based semiconductor fabrication operations training simulator
- Virtual worlds for space science on a sphere
- Game-based decentralized command and control training simulator
- Experimental games for business, cultural critique, art and technology
- Facilitating local game development community
- New game research projects in progress

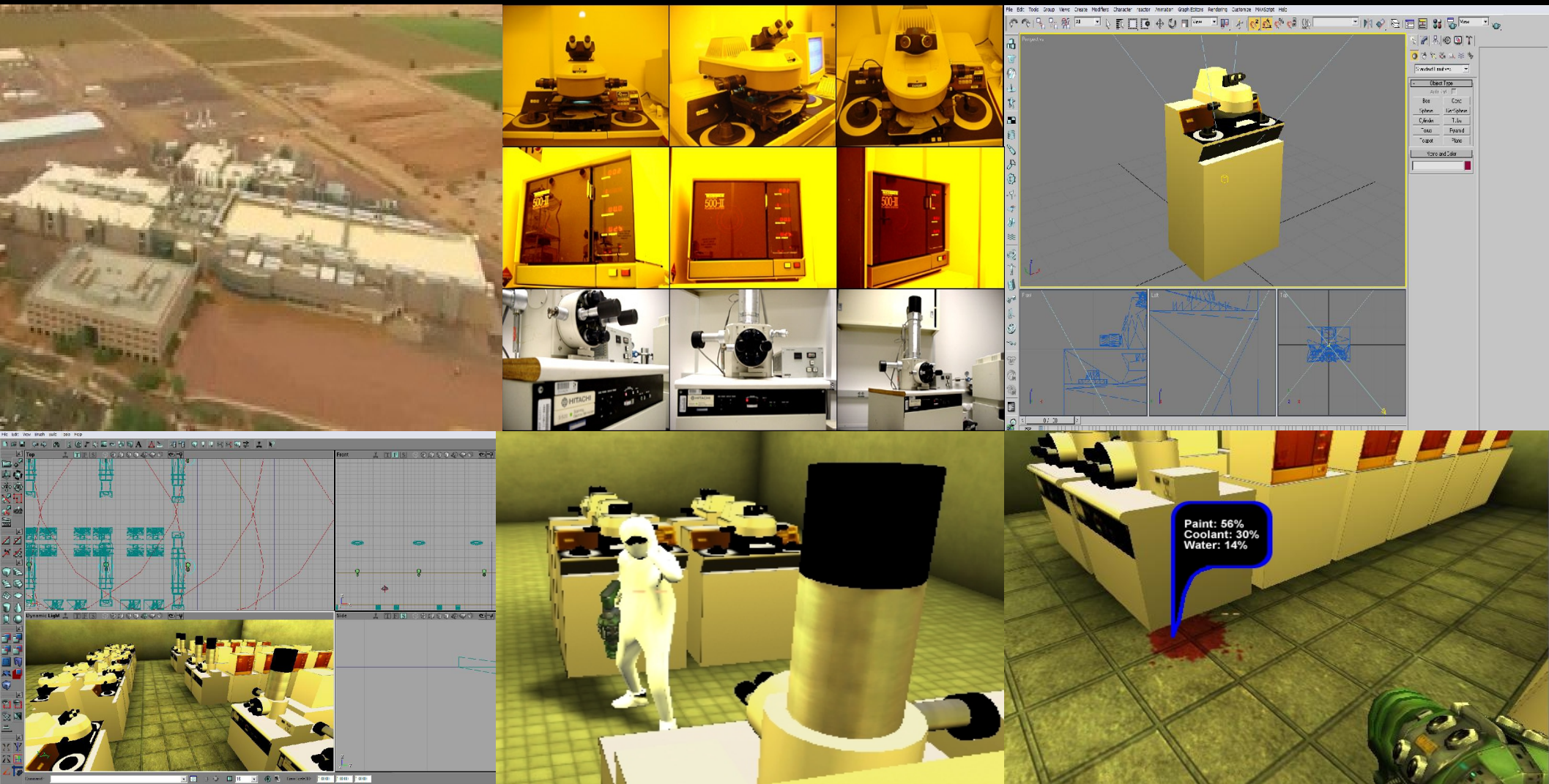
Web-based science learning games for informal science education for K-6 students and families: *DinoQuest Online*



<http://www.DQOnline.org/>

Scacchi, W., Nideffer, R. and Adams, J. (2008), *A Collaborative Science Learning Game Environment for Informal Science Education*, in *New Frontiers for Entertainment Computing*; P. Ciancarini, R. Nakatsu, M. Rauterberg, M. Roccetti (Eds.); Boston: Springer, 71–82.

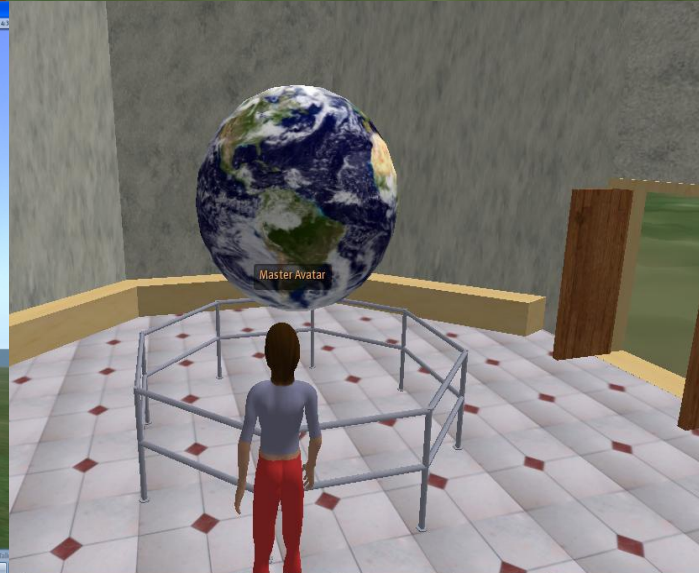
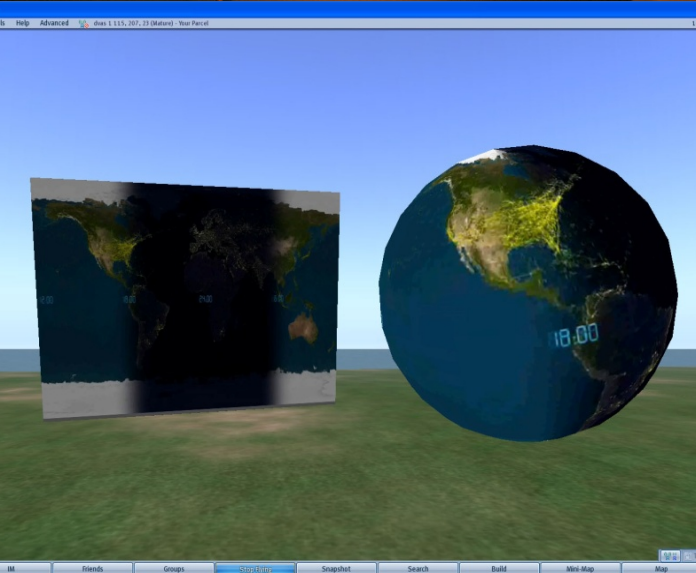
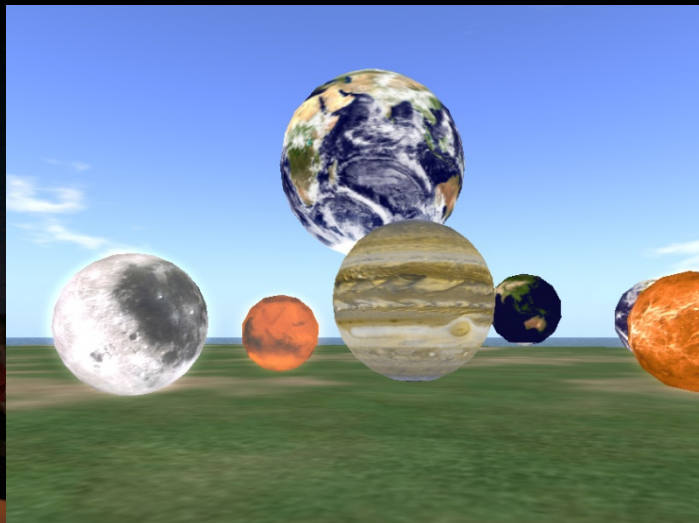
Semiconductor/nanotechnology fabrication operations and diagnostics training game



FabLab Demo Reel

Scacchi, W. (2010). [Game-Based Virtual Worlds as Decentralized Virtual Activity Systems](#), in W.S. Bainbridge (Ed.), *Online Worlds: Convergence of the Real and the Virtual*, Springer, New York, 225-236.

Planetary science data visualization and “spherecasting” support: *NOAA Science on a Sphere* installation in *Opensim* VW platform



Supporting exploration of planets, earth systems (ocean, climate) and near-earth objects (space debris, small satellites, near-earth asteroids)

2D, side-scrolling, *World of Warcraft* inspired, role-playing game parody and CGVW development/modding kit

Aoedipus.net



Game-based VW incorporating real-world news feeds and geopolitically located Twitter feeds



Game-based VW simulator you can actually drive in physical world! -- *OutRun* @ UCI



<http://www.conceptlab.com/outrun>

Community development concept: Supporting UCI video game developers club projects (sample)



Community development concept: *IEEE Intercollegiate Computer Game Development Showcase*



Search...

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Intercollegiate
Game Showcase

2012



Programming skills on Fire

Venue: Chapman University, Folino Theater
Saturday April 28, 2012

Do You Have
What It Takes?



COMPETE in our GAME CONTEST, Win PRIZES,
EARN ACHIEVEMENTS & FINE TUNE YOUR SKILLS





Game Event
details about game event

Venue: Chapman University, Folino Theater,
Saturday, April 28. Setup starts at 1:00. Main event
starts at 2:00 and ends at 4:00...
[READ MORE](#)



Contest Parameters
know more about contest

All platforms are acceptable. Submissions will be
judged based on originality, creativity and
execution – and on whether they are fun to play...
[READ MORE](#)



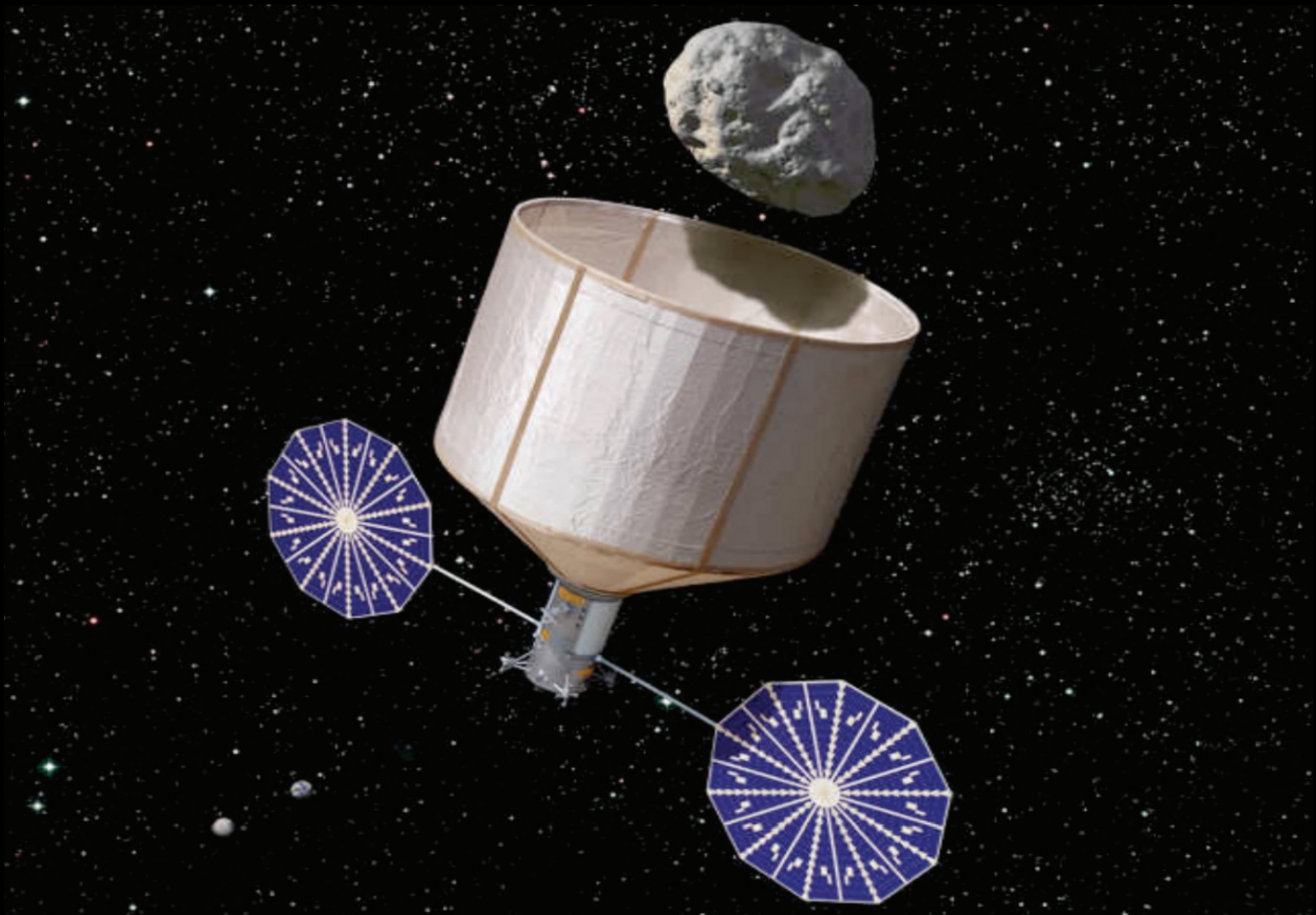
Submission Guidelines
our submission rules etc.

Finalists will be selected based on YouTube videos
3 to 5 minutes long. These should demonstrate
gameplay and key visuals and should include the
name of the game... [READ MORE](#)

New Project: Informal game-based music learning environment for San Francisco Symphony



*New project: develop reusable framework for developing
“science mission games”*



Sample game activity: Capture a near-earth asteroid

Report at http://www.isr.uci.edu/tech_reports/UCI-ISR-12-8.pdf



UCI Research Collaborators

Faculty

– Robert Nideffer, Thomas Alspaugh, Jill Berg, Yunan Chen, Steve Cramer, Alfred Kobsa, Jung-Ah Lee, Crista Lopes, Gloria Mark, Bonnie Nardi, David Redmiles, Richard Taylor, and others

Post-Doctoral Scholars

– Garnet Hertz (UCI LUCI)

Research Staff

– Craig Brown (SMU), Yuzo Kanomata (VDIO), Kari Nies (HRI/ISR), Alex Szeto (ISR)

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- UCI Video Game Developers Club
- IEEE GameSIG
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