



**May 23-29, 2010**

### **Game On: Students Develop Original Video Games Using Interactive Techniques**

When most people play a video game, they just focus on winning, unaware of the multiple science, computer programming, technology and art elements that went into its makeup.

These critical elements are the focus of a course LSU has offered since 2007, in which students work in teams to form “companies” and develop an original video game throughout the course of a semester.

The course is listed in the University’s registration materials as both an art and a computer science course, and the material is interdisciplinary, encouraging students from different academic backgrounds to work together in creating a game, each contributing their strengths to the product. Computer science students work on many of the programming elements, while art students work on storyline and character creation.

LSU offers the video game design class in collaboration with University of Illinois at Chicago, or UIC. In the class, which students attend via high-definition video streaming broadcast from Chicago to Baton Rouge, participants learn core concepts to develop and design video games, from storyline to character development to coding.

Jason Leigh, a computer science professor at UIC and director of the university’s Electronic Visualization Laboratory, teaches the course from UIC in collaboration with LSU’s Robert Kooima, adjunct faculty in the LSU Department of Computer Science and a post-doctoral researcher with the Arts, Visualization, Advanced Technologies and Research, or AVATAR, Initiative in digital media. Kooima worked with Leigh at the UIC Electronic Visualization Laboratory before coming to LSU in 2008.

The video game design course will be part of the curriculum for the AVATAR minor in digital media, which will begin in the Fall 2010 semester, allowing students to take courses in different departments to prepare for careers in digital art, animation, electronic composition, video game design, and related fields.

“The video game design class has been popular since we first offered it, and its success at LSU was one of many reasons we worked to create the digital media minor,” said Stephen David Beck, Derryl and Helen Haymon Professor of Music and AVATAR lead. “Many college students want to learn the necessary skills to work in these emerging

industries, and we hope many of the students who have participated in the video game class will sign up to take other, related courses toward the digital media minor.”

This year, the video game design course had record participation, with 53 students between the two universities. At LSU, there were nine computer science students, 11 art students and one education student participating. The students divided into 12 teams to form companies, and with the exception of one all-UIC group, the companies had an equal balance of LSU and UIC members, who worked together all semester to create an original video game.

Beginning with the 2009 course, Leigh and Kooima began emphasizing games with multi-player, multi-touch capabilities. To give the class a place to experiment with multi-touch gaming, Kooima began building a 52-inch TacTile LCD touch table with high-definition video. The students were able to use this table in rough form to play and display their video games in 2009, but it was completed and available for the 2010 students.

“We always try to emphasize new trends and possibilities in the gaming industry with this course, and a current one is allowing people to touch and interact directly with the game,” Kooima said. “This table gives the students a platform to develop these types of popular games. In the coming semesters, we hope to try other new gaming techniques, such as super-high resolution gaming on tile displays, which occurs on multiple screens simultaneously. We definitely want to keep doing things that are unique.”

As in previous semesters, students spent the final class period of the semester on Friday, April 30, playing and presenting the video games their “companies” created.

Kooima and a judging panel comprised of representatives from the Baton Rouge Area Digital Industries Consortium, Louisiana Tech Park and the Electronic Arts Video Game Test Center in Baton Rouge evaluated the games, which constituted a large component of each student’s final grade. The students had a special guest judge, Tom DeFanti, Ph.D., an internationally recognized pioneer in visualization and virtual reality technologies. DeFanti, who was Leigh’s dissertation adviser and helped establish the Electronic Visualization Laboratory at UIC, was at LSU to speak as part of the AVATAR Lecture Series. He participated in the video game class competition during his visit.

The judges awarded prizes for Best Audio Design; Best Visual Design; Best Technical Achievement, which looked at the computer science elements included in the game; Best Interaction Design, which evaluated how well players could touch and experience the game; Best Bookends, which focused on the titles, sequences and conclusion, elements that Kooima said are important but often overlooked in gaming; and Best Game Play (overall).

With the exception of Best Technical Achievement, which the all-UIC team won, teams with LSU members won in all the other categories, and the LSU students developed and implemented many of the winning techniques in these games, Kooima said.

The winning LSU-led companies and their games are:

**Best Audio Design and Best Visual Design:**

Dark Tide Software for the game “Rise of the Urchins”

Participating LSU students: Keaton Robinson and Michael Davis

In this game, players are underwater and must throw sea urchins at pirate ships to sink them and steal their gold. “This product just went above and beyond,” Kooima said. “The custom music blended in some nautical elements in keeping with the theme, and the overall playing experience was extremely good.”

**Best Interaction Design**

B2 Bomber Games for the game “Power Putt”

Participating LSU students: Kevin Cherry and Katherine Herrin

This was a miniature golf game, but the team added the unique element of allowing other players to push their hands on the touch table and tilt the golf course, making it more challenging for the golfing player, and allowing more touch points in the game. “This was an extremely clever way of drawing in the audience,” Kooima said.

**Best Bookends**

Kenchi Games for the game “Reach”

Participating LSU students: Jason Kincl and Sara Fradella

This company won for adding “very clever and funny” introductions and endings to the game, in which players must grab objects to build a ladder that allows their characters to climb out of a pit, give them a high five, and win. At the end, the winning player can choose how to destroy the remaining players’ characters in the pit, with options such as “Raptor Attack,” which adds an extra creative sequence to the play, Kooima said.

**Best Overall Game Play**

Magnetic Enigmatic for the game “POL”

Participating LSU students: Jason Meador and Lee Vanderlick

This two-player game is similar to the popular online game “Bejeweled,” but is more interactive and created for the touch table. Balls fall down from the top, and players must stack like items in rows to make them disappear. Extra and discarded balls push toward the other player, who loses when so many balls pile up that they hit the side of the display. “The interaction in this game was complex, deep and well-thought out,” Kooima said. “Overall, all their elements just led to a good game.”

The University plans to continue offering this course once a year, and it will return in the Spring 2011 semester.

**Pats on the Back:**

- Bety Rodriguez-Milla and Kathy Traxler received an award from the Louisiana Board of Regents titled "Computational Science Workshop for Louisiana Educators." The award is in the amount of \$29,726 for five months. This award will fund the summer workshop taking place at CCT July 19-23 to show Louisiana high school teachers

how to incorporate computational science into their curricula.

**Please Note:**

- Prior approval is required for Special Meal Requests. Employees who make meal purchases without prior approvals may find that they must cover the cost of any monies spent for an unapproved event out of pocket, especially now that state funds are under a spending freeze. Please contact Susie Poskonka ([susie@cct.lsu.edu](mailto:susie@cct.lsu.edu)) prior to any special meal with visitor(s) to file the appropriate request for approval. Prior approval could take up to one week, so please plan accordingly.
- Please note that the University has frozen all LaCarte spending, unless cardholders receive written approval for a purchase from Accounts Payable or Purchasing. If you have a purchase you wish to make that you feel may warrant an exemption to the spending freeze, please contact Theresa Markey or Andrew Cox in the CCT Business Office for guidance
- [Early bird Registration](#) and housing is now available for [SIGGRAPH 2010](#), the premier conference on computer graphics and interactive techniques. Register now for five days of education, exploration, and inspiration at [SIGGRAPH 2010](#) in Los Angeles, July 25-29 at the Los Angeles Convention Center. [Early registration](#) discounts are available through June 4, 2010.
- The Virtual School of Computer Science and Engineering is now accepting registrations from graduate students, postdoctoral researchers, and professionals from academia, government and industry for a course on Petascale Programming Environments and Tools, which will take place July 6-9. In this course, participants will learn how to scale up computational science applications and cyberinfrastructure for petascale-class machines. This course is offered as a distributed program among 10 sites, including CCT. To register or learn more, visit <http://www.vscse.org/summerschool/2010>.
- **Supercomputing Conference 2010 Information and Deadlines:**
  - SC10 is now accepting nominations for the 2010 Seymour Cray Computer Engineering Award, the Sidney Fernbach Memorial Award, and the Ken Kennedy Award. These awards will be presented during the conference, Nov. 13-19 in New Orleans. Nominations are due Thursday, July 1, 2010. Links to nomination forms and more information about these awards is available at <http://sc10.supercomputing.org/?pg=awards.html>.
  - SC10 is seeking submissions for posters and ACM student posters that display cutting-edge, interesting research in high-end computing, storage, networking and analytics. Posters provide an excellent opportunity for short presentations and informal discussions with conference attendees. Posters will be prominently displayed for the duration of the conference, giving presenters a

chance to showcase their latest results and innovations. One poster will be honored with a Best Poster Award. A limited number of active displays will be part of the poster session. Students who are ACM members also are encouraged to submit posters as part of the ACM Student Research Competition (SRC), with awards and special recognition at SC10 plus the chance to compete in the SRC grand finals. Submissions are due July 15, 2010. For questions, contact: [posters@info.supercomputing.org](mailto:posters@info.supercomputing.org), or visit the submission site, <http://submissions.supercomputing.org>.

- A Symposium on High Performance Computing Workforce Development will take place during SC10, Nov. 16-18, 2010. This symposium will address the skills, training and expertise needed to develop a strong, effective high-performance computing-based workforce. The symposium now is accepting paper submissions and proposals for panels that address high-performance computing and cyberinfrastructure workforce development. Suggested topics include current problems, proposed or demonstrated solutions, and future considerations. Papers should not be longer than 10 pages, and panel suggestions should include a 150-word maximum abstract. Paper and panel submissions are due July 15, 2010 at the SC10 submission site, <http://submissions.supercomputing.org>. The program committee will review each submission, and notify participants of acceptance by Aug. 15, 2010.
- The SC10 Doctoral Research Showcase invites Ph.D. students in high-performance computing, networking, storage, analytics, and visualization who anticipate graduating within a year to submit a short summary of their research for consideration toward the conference program. Those selected will have an opportunity to present a 15-minute summary of their research to experts from academia, industry and research laboratories. Students should submit a single page summary of their doctoral research, along with a publications list and three slides on their key findings and results for consideration by Monday, July 26. For more information, please contact [doc-showcase@info.supercomputing.org](mailto:doc-showcase@info.supercomputing.org), or visit the Web site, <http://sc10.supercomputing.org/?pg=doctsc.html>.
- The SC10 Education Program is now accepting applications for travel support to attend the conference, which will take place Nov. 13-19 in New Orleans, Louisiana. The program is open to undergraduate faculty, undergraduate and graduate students, and high school teachers interested in learning how to use supercomputing and computational science in their classrooms. Participants are encouraged to stay through the entire conference, where they will be engaged in hands-on activities to encourage them to apply computational science, grid computing and high-performance computing resources in education. The deadline to apply for the SC10 Education Program event is July 31. For more information, please visit <http://sc10.supercomputing.org/?pg=edprog.html> or e-mail [education@info.supercomputing.org](mailto:education@info.supercomputing.org)

- Applications for Student Volunteers for [SC10](#) are now being accepted. The deadline to apply is Sunday, Aug. 27. Undergraduate and graduate students are encouraged to apply as volunteers to help with the administration of the conference. In exchange, students will receive complimentary conference registration, housing (for out-of-town volunteers) and some meals. Volunteers will be expected to be available for a total of 4-5 hours of work per day during the week of the conference, which will take place Nov. 13-19 in New Orleans. Successful applicants will be notified of their acceptance by Sept. 30. If you have any questions please e-mail [student-vols@info.supercomputing.org](mailto:student-vols@info.supercomputing.org).
- Please remember to send your news concerning grants, awards, conferences, or other pertinent information to PR Manager Kristen Sunde at [ksunde@cct.lsu.edu](mailto:ksunde@cct.lsu.edu).
- Follow CCT with social media to access photos and see news, events or updated information. Both these pages are public; you do not need an account to view the information.
  - [Facebook group](#) : LSU Center for Computation & Technology
  - [Twitter](#) : LSUCCT
  - [YouTube channel](#) : LSUCCT

### **Upcoming Grant Deadlines:**

**Note:** Please check the [CCT deadline Web site](#), since it is updated daily.

### [Expeditions in Computing](#)

September 10 2010 10:00 am

At Least \$ 10,000,000.00 available