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LSU CCT to display research, student & partnership activities at inaugural campus-wide TechPAWLooza

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The LSU Center for Computation & Technology (CCT) will present research, student, and partnership activities enabled through innovative computational science, advanced cyberinfrastructure, high-performance computing systems, high-speed networking, and economic development initiatives, as part of the first-ever LSU TechPAWLooza, March 3 (Noon-5:00 p.m.), LSU Student Union Royal Cotillion Ballroom.

LSU CCT is an innovative research environment, advancing computational sciences, technologies and the disciplines they touch. Uniting researchers from diverse disciplines helps disseminate ideas and expertise across LSU departments, thereby fostering knowledge and invention. The CCT encourages the University community's involvement in the exciting and groundbreaking activities currently underway. Activities to be showcased at TechPAWLooza are as follows:

The Off-the-Shelf Virtual Reality station combines a Panasonic 3D television with a Microsoft Kinect body motion sensor, giving an interactive experience greater than the sum of its parts. A 3D display does provide the illusion of depth, but the addition of motion tracking lends a much more powerful sense of presence: a virtual reality, like looking through a window, or into a fish tank. Interaction in this space is a natural extension of the user's own hands and arms. In this context Robert Kooima and Jinghua Ge and their team demonstrate a number of interactive tools, toys, and visualizations developed at CCT.

With the **Kinect Synthesizer**, Stephen D. Beck uses data from a Microsoft Kinect body motion sensor to control sound synthesis. Several configurations allow you to play a virtual Aeolian harp, a polyphonic virtual Theremin, or any other kind of sound engine. The purpose of this project is to explore new modes of physical interaction and music making, with the ultimate goal of developing performance interfaces that facilitate and support musical understanding and competencies in uninitiated users.

Tile Display, Tangible Visualization. Brygg Ullmer's team concentrates on tangible visualization--making data presentation meaningful, intuitive, and memorable. The tile display is an example of hardware they have developed to support this vision: the large 10 megapixel surface, spread across four screens, offers a resolution unmatched by standard screens and projectors, ensuring visibility and clarity. Interaction is done through a 'casier,' a category of novel input devices embedded in various physical objects, thus allowing seamless participation by any number of participants. The result is a setup with flexibility that allows cooperation between students, teachers, and researchers in a variety of configurations.

Undergraduate Minor in Digital Media. LSU's Arts, Visualization, Advanced Technologies, and Research (AVATAR) Initiative in Digital Media offers an interdisciplinary academic program to help students learn skills in the broad, exciting, and emerging field of digital media. The minor will prepare students for careers such as digital artist/animator, character rigging artist, digital technology manager, game developers/designers, digital sound engineering, computer programming, network development and web applications. For more information, visit www.avatar.lsu.edu.

The **CCT HPC** (high performance computing) staff will display a multiple computer cluster illustrating hardware-supported parallel computations. Stop by and see how HPC can assist your research efforts. Students interested in getting involved in representing LSU in local, national and international programming contests should also visit.

Economic Development Initiatives of the LSU CCT: CCT's Economic Development department actively looks for ways to create new industry partnerships and opportunities to pair University resources with companies like Electronic Arts, Inc. that could benefit from relationships with higher education.

"The greatest challenge any city, state, or region has in attracting new jobs is having sufficient numbers of qualified employees," said Stacey Simmons, associate director for CCT's economic development department. "As LSU leads the development of creating training in the digital industries across the state, we have to also provide practical ways to teach teamwork, collaboration, creativity, constraint, as well as the core principles of the digital industries."

EA Baton Rouge will be in attendance with games and prizes. While you're there, be sure to check out their demonstrations on finding bugs within game software and how to "crash" a video game. They'll also be showing their "Inside the EA North American Test Center" video to give prospective game testers an idea of what makes testing games the most fun job on the planet.

Red Stick International Animation Festival will be showcasing screenings from their 2010 "Best of the Fest" competition. The festival accepts entries from students, amateurs, and professionals in the following categories: animated short film; music video; scientific visualization; animation for commercials; animation for games; animation for young audiences, and experimental animation/visual music. More information on the festival can be viewed at: redstickfestival.org.

The Stop Motion Animation Course was developed as a two-part class in order to help students spend time on the full pipeline of the animated film process. Students spent a semester in visual development for the course, working on the look of the film as well as the characters and sets. The second semester of the course was all about production. Students were each responsible for a scene and making sure the scene conveyed action, emotion, and the point of the story. In the end, the students took over 10,000 shots to animate a short film based on the Norse Myth of the Fenris Wolf. Their film "Fenris & Tyr" will be shown at TechPAWLooza. The students put in a great deal of work and rose to the challenge of realizing this ambitious project. As a result several of them are pursuing internships and jobs in animation studios.

TechPAWLooza is a day devoted to informing and engaging LSU students, faculty, and staff in the abundance of technology available at Louisiana State University, for teaching and learning, for technology support, and for redefining and engaging the education community.

"We are glad to have this opportunity to share with the University community the innovative creations our researchers and collaborators are developing. The CCT has grown vigorously over the last few year's, and as we continue to grow, I'd like to see more and more faculty, staff and researchers on this campus involved in computational research. I look forward to seeing everyone at TechPAWLooza," said CCT Director Joel E. Tohline.

For a complete listing of TechPAWLooza activities, visit https://sites.google.com/site/lsutechpawlooza/home.

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