

Research Highlight

Brain-Machine Interfaces may Sometime Control Prosthetic Limbs with Thought

Devices known as brain-machine interfaces may someday be used routinely to help paralyzed patients and amputees control prosthetic limbs with just their thoughts. UF researchers are working to make that happen.

To create this type of brain-machine interface, Justin C. Sanchez, PhD, UF pediatric neurologist, and his colleagues developed a behavior-modification system tested on rodents.

"We think this dialogue with a goal is how we can make these systems evolve over time," Sanchez said. "We want these devices to grow with the user. Also, we want users to be able to experience new scenarios and be able to control the device."

Dawn Taylor, PhD, Case Western Reserve University biomedical engineer, said the results of the study add a new dimension to research in brain-machine interface. UF researchers trained rodents to use a robotic arm and then obtain significant results from animals lacking the mental capacity of primates which is impressive, she said.

"It's a clear demonstration of a methodology that will work in situations when other implementations would fall apart," Taylor said.

To develop and test this brain-machine interface, Sanchez collaborated with engineering professors Jose Principe, PhD, and Jose Fortes, PhD, and engineering doctoral students Jack DiGiovanna and Babak Mahmoudi.

The National Science Foundation, the Children's Miracle Network and the UF Alumni Association help fund the study.

For the complete story, visit www.shandskids.org and reference Children's Miracle Network News. *Story courtesy of the University of Florida Health Science Center.*

Safe Kids

Ten Tips for Buying Toys this Holiday Season

This year there have been tens of millions of toys recalled due to lead paint, small magnets or toxic chemicals. With such uncertainty regarding toy safety, Safe Kids compiled the following tips for buying safe toys this holiday season:

1. Do not buy metal jewelry for young children, as it may contain lead.
2. Test toys for lead by using a home lead test kit. Although they may be limited in their use, a positive test result indicates a high likelihood that the product contains lead.
3. Be careful of toys with magnets. Many toys have small magnets that can fall out and, if swallowed, can cause serious health problems that are hard to diagnose.
4. If you find loose, small magnets anywhere around the house, track down the source. Immediately take the product and any of its other magnetic components away from your child.
5. Stay away from permanent paints and markers when purchasing arts and crafts materials. Look for water-based paints and glues.
6. Look for the age grading on toy packages and purchase age-appropriate toys.
7. Use common sense; some toys may be inappropriate for your toddlers and babies. Toys labeled for children 3 and older may have small parts that can be a choking hazard.
8. Beware of toys that can be broken into smaller pieces such as chalk, crayons or caps from markers. They can pose choking hazards to toddlers and babies.
9. Use caution when children play with small balls, tricycles and balloons. Balls less than 1-3/4 inches in diameter can pose a choking hazard to young children. Children can suffocate while trying to blow up a balloon or while chewing on or sucking a balloon.
10. Before you shop, check recent toy recalls at <http://www.notinmycart.org/> or <http://www.recalls.gov/>. You can also sign up for automatic recall notifications at <http://www.cpsc.gov/>.

Celebrity Waiter Night Served up \$277,865

About 120 Shands HealthCare employees dressed in costume and served 325 guests at the 23rd annual Celebrity Waiter Night to benefit Shands Children's Hospital. The event was held at the Holloway Touchdown Terrace on the UF campus on May 19. Each celebrity waiter dressed up in creative costumes according to the theme "Florida Theme Parks" as guests dined on Italian cuisine catered by Napolitano's Restaurant. The following 10 Shands HealthCare departments participated: Facilities, Finance, Human Resources, Information Services, Legal Services, Managed Care, Nursing, Operations, Pharmacy and Rehab. An 11th team was the UF Pediatric Physicians. Since 1986, Celebrity Waiter Night has raised more than \$1.75 million.



Facilities Team



Finance /Legal /Human Resources/Managed Care Team



Information Services Team



Nursing/Operations/Rehab Team



Fishing for Kids

Members of the Shands Engineering Committee for Fishing for Kids at their check presentation. The 2008 tournament raised \$9,341.15 for Shands Children's Hospital. The 2009 Tournament will be held April 25 in Steinhatchee, Fla.