Robotics Open House April 7, 2017

Check-in & Bus Drop-off at Ronald Tutor Hall (RTH)

4th floor: 9 AM – 5 PM [closed noon – 1 p.m.] 7 lab demos starting every half hour
(enter via west elevator or east staircase, as directed at check-in)

5th floor: 9 AM – 2 PM continuous demos from VexU Team (SoCal Champions!)

11 a.m. – 2 p.m. interactive opportunities on the 2nd floor, 1st floor and courtyard

2nd Floor: Interactive Demos with BB-8™ robots, Pleo Petting Zoo & Battle Bots – USC Viterbi’s STEM Educational Outreach Programs students and staff plus Bob Barboza (of Bob Barboza Space Center) invite students to play.

1st Floor: RTH 105: Premiere of short film & discussion, “When Dinosaurs Ruled the Earth,” about a child on the autism spectrum and his relationship with a robot designed in the Interaction Lab (which is on the 4th floor)

Lobby: Learn more about CS summer camps at USC as well as Living Advantage’s April 14 Intro to Robo Festival

Courtyard: Swimmers – Predict how surface design influences speed when robots race in water, then test your hypothesis.

RTH – East Stairs & East Hallway

4th Floor RTH 417: “learners”

note this one lab’s limited hours: 9 – 11 AM, 2 – 4 PM
Computational Learning and Motor Control
Sarcos Master & Slave arm; Phantom Omni Arm; neuroscience; machine learning; non-linear control
www-clmc.usc.edu

4th Floor
RTH 416: “workers” (9 AM – noon, 1 – 5 PM)
Autonomous Robotic Manipulation
ARM Robot; manipulation; machine learning; non-linear control; perception action loops www-clmc.usc.edu

5th Floor RTH 526: VexU Team (9 AM – 2 PM only)
The team shows its winning robots & talks shop.

RTH 4th Floor – Enter by Elevators (west) or East Stairs (as directed at check-in)

RTH 426: “explorers” -- Robotic Embedded Systems Lab
marine robots; environmental monitoring; multi-robot systems; sensor data processing (perception); robot and world state estimation robotics.usc.edu/resl
RTH 424: “helpers” -- Robot Work Space
The PR2 robot focuses on interactive perception and manipulation planning; learns from environmental interaction robotics.usc.edu/interaction
RTH 423: “interactors” -- Interaction Lab
human-robot interaction for socially assistive robotics; embodied communication & interaction; influencing social dynamics; activity & user modeling and understanding; Bandit humanoid robot; Shortbot squash-&-stretch robot robotics.usc.edu/interaction
RTH 422: “humanoid” -- Human Centered Robotics Lab (NOTE: this lab open limited hours)
Sarcos Humanoid; legged locomotion, non-linear control; machine learning; perception www-clmc.usc.edu
RTH 421: “modellers” -- Brain-Body Dynamics Lab
Haptic robotics, neuromorphic computing; non-linear dynamics; modeling disease progression http://bbdl.usc.edu/Valero-Cuevas-Lab.php

#nationalroboticsweek Find our NGSS Lesson Plans & links about the labs you visit: https://viterbipk12.usc.edu/research/robotics-openhouse/
Robotics Open House, April 7, 2017
Learn more about USC Viterbi robots & Robotics Month
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HNB (Hedco Neurosciences Bldg)
Basement Labs 9 AM – 1 PM, 2 PM - 5 PM
Enter northeast door off Watt Way to 5 basement labs
iLab ilab.usc.edu
researching the brain’s visual processing via computer models

HNB 30: “flyers” -- helicopter & flying robots; drone; air delivery robot; submarine & ocean exploration; ship maintenance & marine life survey
HNB 6: “beobot” -- assistive robot; transport; home care robot
HNB 10: “smart camera” -- visual attention; gaze control; object recognition; brain processing; artificial intelligence,
HNB 10: “3D printers”
HNB 11: “builders” – robot design & parts, machining
HNB 13A: “electronics” – build circuit boards for robot brains

From 11 AM – 1:30/2:00 PM HNB 1st Floor, use southwest door 1st floor off Downey Way
HNB 107 11 AM – 2 PM “EscapeBots” – Programming; hands-on maze navigation with ball robots
HNB 100 11 AM – 1:30 PM Film premiere: short film & discussion, “When Dinosaurs Ruled the Earth,” about a child on the autism spectrum and his relationship with a robot designed in the Interaction Lab (RTH 423)

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Yes, bring your lunch to campus!
Food on campus: bit.ly/ROHLunch
Order food in advance:
http://www.tapingo.com/order/campus/usc/pickup/

RRB (Rapp Engineering Bldg.)
9 AM – 1 PM “teammates”
Automatic Coordination of Teams Lab
Designing interaction among robots to do group tasks. Crazyflie; Turtlebot
act.usc.edu
More: https://www.youtube.com/watch?v=MIftHuXPbv4

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