

TESC Girls' Day Out at CTE Lab

by Brad Hansen, ed. Johnny Du

On January 10th, 2009, members of the Cartilage Tissue Engineering Lab participated in Girls' Day Out, a Triton Engineering Student Council outreach event. Graduate students Jennifer Antonacci, Brad Hansen and Jean Wheeler took part by giving lab tours to approximately 40 middle school students from the greater San Diego area.

Jean began by giving the students an overview of the CTE Lab. Jean explained that degenerating cartilage leads to pain and loss of mobility in patients and that the CTE Lab's goal is to create viable tissue engineered solutions to this problem. This presentation was followed by a brief tour of the lab, including the harvest room, tissue culture room, and lab bench areas.

The students then gathered around the robot mechanical test system for a demonstration of prototype hardware, mechanisms, and software. Brad showed the range of motion of the robot and described the capabilities for performing mechanical tests, including multiple sample indentation testing. He also demonstrated the CTE Lab's 3D scanning system and displayed representative images.

To finish the tour, Jennifer led the students to the friction testing setup in the mechanical test room. She explained that during normal articulation, cartilage surfaces are pushed together and slide over each other, creating compression and shear forces. The friction test simulates this environment so that the lubrication properties of various solutions can be explored. It was highlighted in all the CTE graduate student presentations how these systems and tests can increase understanding of disease progression and potential treatment strategies, ultimately benefitting society.

The CTE Lab and TESC supplemented the lab tour by providing the students valuable information about science and engineering as a career path, along with some of the various projects future scientists may potentially explore.

For more information, please visit <http://cte.ucsd.edu> and <http://tesc.ucsd.edu>.