Meet the Robots of CMU! March 16th, 2015

We will be visiting robots from five different labs within the Robotics Institute today:

CoBot/CMDragons:
The CoBot robots are a group of service robots that autonomously perform tasks for inhabitants of the Gates-Hillman Center. These robots have traveled more than 1000 km autonomously performing useful tasks for humans, and allowing us to research the problem of deploying a mobile robot indefinitely in a human-populated environment.

The CMDragons are a team of fast, team-oriented autonomous soccer robots, designed to compete in the robot soccer world championship RoboCup. Competition in this apparently special-purpose domain allows us to create robust research solutions to broader problems of single and multi robot autonomy.

Sarcos:
Sarcos is a full body humanoid that stands, balances and walks on its own two feet with movements that are fluid. Sarcos can get pushed with a stick and step forward to adjust its balance so that it doesn't fall over. This is because Sarcos doesn't just perform pre-programmed joint movements, but is actively adjusting balance throughout each movement.

HERB:
HERB is the Home Exploring Robot Butler. He serves as the research platform of the Personal Robotics Lab, which is directed by Siddhartha Srinivasa. He is a testbed for algorithms, software and other technology that will enable robots to perform challenging manipulation tasks in places where people live and work. He works on behalf of the Quality of Life Technology (QoLT) Center, a National Science Foundation Engineering Research Center dedicated to applying robotic and information technologies to the everyday lives of people.

Tank:
Tank is a robot receptionist for Newell-Simon Hall. He combines useful functionality - giving directions, looking up weather forecasts, etc. - with an interesting and compelling character. His story is revealed over time through his interactions with people and phone conversations with his friends and family. Researchers are using Tank to investigate human-robot social interaction, especially long-term human-robot "relationships."

Ballbot:
Most robots that are of people-appropriate height must have low centers of gravity, very wide
bases of support, and low speed to avoid tipping over. This makes them not very people-shaped, which can make it difficult for them to operate in normal environments. Researchers thus decided to develop Ballbot, which is a person-sized mobile robot that balances dynamically on a single spherical wheel.