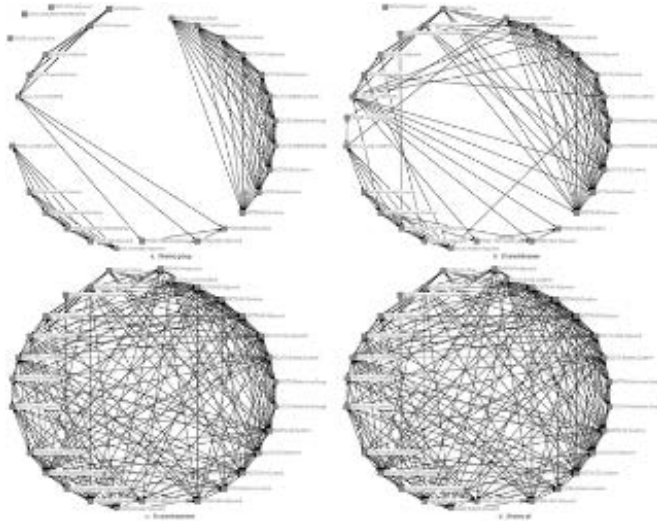


Barnes Research Group



My research group works in the area of distributed, intelligent systems, specifically at the junction of health information technology, machine learning, and robotics. We are interested in problems such as computationally modeling group behavior and interactions, integrating machines and networked systems with mixed levels of autonomy into environments with humans, and the creation of new tools that aid in patient disease management and education as well as healthcare delivery.

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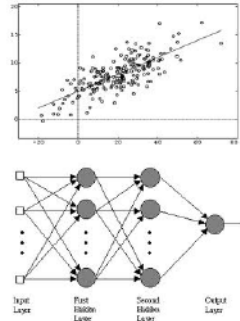
434.924.1723

"Intelligent systems for healthcare and robotics"



Intelligent Systems for Healthcare

Our group focuses on designing technology to improve healthcare for both patients and providers. We design and evaluate pervasive systems, software tools and analytical models that focus on unique characteristics of the individual patients and clinicians.



Robotics & Multiagent Systems

Research in this area is specifically focused on multiagent coordination and collaboration in complex, dynamic, and unstructured environments. We are working on developing frameworks for modeling groups of robots and emergent group behaviors with ground and air vehicles.

Additionally, we are focusing on control of mixed-autonomy robotic systems. Most recently, we designed optimized human swarm displays and unique control modalities such as gestures to allow efficient interface with a robotic swarm in dynamic environments.



RECENT RESEARCH DEVELOPMENTS

- Patient-Centric Predictive Health Monitoring in Adult ICU Patients project begins August 2013.
- Towards a Classification Model to Identify Hospice Candidates in Terminally Ill Patients - International Conference of the IEEE Engineering in Medicine and Biology Society, San Diego, CA, August 2012

RECENT GRANTS

- National Institutes of Health – Feasibility of Virtual Agent Cervical Cancer Education for Hispanic Farmworkers

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