MHI provided resources for leading researchers to visit USC to collaborate with faculty and students, which is essential to help define and contextualize the right set of research questions for specific domains.

Events

9/28/12
Engineering and Autism: A national workshop
MHI Director, Shri Narayan, organized a large meeting and workshop at USC. The workshop highlighted possibilities of engineering and computing advances to support research in Autism by creating synergies and initiating dialog. The broader community of stakeholders including families, as well as researchers and clinicians were part of the 200 guests that attended the workshop.

10/27-28/12
Annual Electrical Engineering Retreat
The department retreat was developed by MHI to bring faculty and Ph.D. students together in a social environment to receive information about the latest alumni accomplishments as well as opportunities for future collaboration. There was good conversation about the latest alumni accomplishments as well as opportunities for future collaboration.

10/1/11 - 10/1/12
The MHI Driving Simulator (DriveSafety DS-100) is located in the Center for Advanced Transportation Technologies Laboratory. The research team conducts the simulator validation study to evaluate perception of the environment between a real car environment and that of the simulator. This validation process is essential in order to draw more reliable conclusions when using the simulator to test different driving concepts. After validation they plan to test a driver/vehicle diagnostic system application vehicle following and lane change tasks during dangerous situations that cannot be tested in an actual vehicle due to safety considerations. These tests will help researchers evaluate the effectiveness of the system in using it to provide warnings or assistance to the driver in real driving environments.

Seminars

MHI continues to provide support for innovative seminar series that show continued success by positive attendance and collaborations. These series target high quality academia and industry speakers that present the latest ground breaking research in their related field.

Integrated Systems Seminar Series
Spring 2011 - present. Professors Shamgar Gurevich and Alexander Fish visit and is looking forward to future collaborations with USC. Their objective is to finalize mathematicians from a top institution. The University of Wisconsin, Madison (Principal Investigator: Urbashi Mitra) February 5-9, 2013.

Quantum Information Seminar Series
Spring 2012 - present. The USC Quantum Information Seminar Series hosts speakers from around the world presenting the latest groundbreaking research in quantum information theory and experiments. Quantum information seminars are co-hosted with the condensed-matter physics group, to promote interactions at the intersection of both of these lively fields.

Ph.D. Student Seminar Series
Developed by the 2012-2013 MHI Ph.D. Scholars Fall 2012 - present. The Ph.D. Student Seminar Series is aimed at improving interaction and fostering a tight-knit community among EE Ph.D. Students. This seminar will enhance the effectiveness of the Ph.D. Student groups in the department. Ph.D. Students will benefit by giving talks to a broad audience which train them for job interviews, qualifying exams, and other research talks. This seminar provides an informal environment where presenters will give a 20 minute talk about their research topics and gain feedback from their fellow students.

Research

Large-Scale Software Radio Testbed
The Large-Scale Software Radio Testbed aims to build one of the best software radio testbeds in the world at USC. Faculty in the EE department proposed four multidisciplinary projects that began as soon as the first radios arrived and have committed a number of Ph.D. students towards practical research. Two of those projects, namely, creating a distributed multiuser MIMO system from distinct base stations and demonstrating a massive multi-user MIMO system, have produced important results. Postdoctoral scholar, Marcelo Segura was hired to assist with this research from 10/1/2013-10/1/2013. These test-beds are available to all the researchers at USC.

MHI Driving Simulator
Principal Investigator: Petros Ioannou

Alumni Bay Area Reception
Alumni Bay Area Reception is one of MHI’s main goals to continue enhancing innovation and excellence. Over 50 alumni attended the San Jose networking event to re-connect with former classmates and meet local alums with the possibility for future collaboration. There was good conversation about the latest alumni accomplishments as well as opportunities for future collaboration.
Established in 2010, The Ming Hsieh Institute (MHI) is a research institute focused on enhancing academic and research programs in the Ming Hsieh Department of Electrical Engineering. Through supporting innovative activities and hosting top research visitors, MHI positions the department at the forefront and provides leadership in the study of emerging fields within electrical engineering. Sponsorship is aimed to support programmatic activities that broadly benefit electrical engineering faculty and students, build an energetic academic environment and increase the department’s impact and visibility.

**Research**
- MHI support includes:
  - 54% Research: supported research projects and workshops initiated by EE faculty
  - 19% Visitor Program & Seminars: support for leading researchers from around the world to visit USC to give talks and collaborate with electrical engineering faculty and students
  - 19% Scholar Program: award, travel funding, workshop and event support
  - 8% Annual Department Events: developed, organized and hosted by MHI with the objective to encourage faculty, student and alumni collaboration to initiate remarkable research

MHI Ph.D. Scholars
- Moh Amer
- Kartik Audhkhasi
- Hao Huang
- Onsirde Osoha
- Daphney-Stavroula Zois

**Faculty Advisory Council**
- Murali Annavaram
- Martin Gundersen
- Petros Ioannou
- Richard Leahy
- Urbashi Mitra
- Michelle Povinelli
- Viktor Prasanna

The 2012/13 Scholars developed the Ph.D. Student Seminar Series

Past Scholar Samir Sharma used his travel funding to give a talk at the University of Wisconsin, where he is now a Research Associate

Former MHI scholars-turned faculty members Firooz Aflatouni, Prasanta Kumar Ghosh and Chuan Wang are all working on exciting research. July 2013 news announced Wang creates the first user-interactive sensor network on flexible plastic.

“if you look at what the graduate and undergraduate students are demonstrating today, there is absolutely no doubt that what we have is one of the top departments in the country, and we have some of the best minds and best faculty conducting this research.”

Asad Madni, USC EE Advisory Board at the 3rd Annual Research Festival