Multi-Resolution Tracking of a Moving Target in Information Fusion Area.” Zhanshan Wang, who is an associate professor at Northeastern University in China, presented “Stability Analysis of Recursive Neural Networks.” The final talk was given by Jiangtao Cao, professor at Liaoning Shihua University, who presented “Type-2 Fuzzy Reasoning Systems.”

AWARDS
In addition to the plenary talks, papers were presented by the attendees at the conference. After careful evaluation by the Awards Selection Committee, two papers were selected for Best Paper Awards. The first award was given to “Dynamic Character and Flight Control of a Tailless V/STOL” by Ji-Hong Zhu, Yong Fan, Kai Liu, Xian-Yu Meng, and Xi-Li Yang. The second award was received by Guoliang Wang, for “Hinfinty Control of Continuous-Time Singular Markovian Jump Systems with Bounded Transition Probabilities.”

SIGHTSEEING AND CLOSING CEREMONY
During the conference, the attendees were invited to visit the Memorial Hall of Leifeng, the Prison of World War II Criminals, and to view the beautiful scenery of the Dahuofang Reservoir in Fushun City.

In the closing ceremony on August 22, Jianbo Su, chair of the Youth Working Committee of CAA, announced that the 26th YAC will be held in 2011 in Nanjing, Jiangsu Province, P.R. China, where it will be hosted and organized by Southeast University. We would like to welcome friends from all over the world to Nanjing, China, next year.

Ping Li, YAC General Chair,
Jianbo Su, Program Chair,
Baocun Qu, Organizing Chair

Sixth NSF/Northeast Control Workshop

The Sixth NSF/Northeast Control Workshop was held at the Johns Hopkins University (JHU) Homewood campus in Baltimore, Maryland, Friday April 23 to Sunday April 25, 2010. This annual workshop aims to enhance the education and professional preparation of graduate students and postdocs in the northeast United States by providing them with an opportunity to present their work in an intimate setting; to interact with their peers, established researchers in the field, researchers from industry and government labs, and program managers from the National Science Foundation (NSF); and to hear about cutting-edge research and cross-disciplinary topics of interest from a select group of invited plenary speakers and keynote lecturers. The workshop series was initiated by Murat Arcak (University of California, Berkeley) and George Pappas (University of Pennsylvania) in 2005, and has since grown to a popular annual event.

This year’s workshop was organized by Danielle Tarraf (Johns Hopkins University) and was coorganized by Bruno Sinopoli (Carnegie Mellon University). Support for the workshop was provided by the NSF and the dean of the JHU Whiting School of Engineering, enabling the organizers to cover the majority of travel and participation costs for the attendees. The workshop drew over 80 participants, including 15 faculty members.

The single-track technical program included 26 presentations by students and postdoctoral scholars from 13 institutions including The Applied Physics Lab, Boston University, Carnegie Mellon University,
Georgia Institute of Technology, JHU, Massachusetts Institute of Technology (MIT), Northeastern University, Princeton University, Rensselaer Polytechnic Institute, the University of Illinois at Urbana-Champaign, the University of Maryland at College Park, the University of Pennsylvania, and Yale University. The technical talks were each 25 minutes and grouped thematically into five sessions spread out over the three days of the workshop. They covered a range of topics including hybrid and switched systems, games, distributed control and consensus algorithms, numerical methods, and optimization. The applications discussed ranged from systems biology to robot vision and energy-efficient cooling of electronics.

The technical program featured three plenary talks and two keynote lectures. The plenary talks were intended as a forum for presenting and discussing recent technical results, while the keynote lectures were tutorial in nature, broadly surveying application fields of interest while highlighting emerging open problems. The plenary talk delivered by Sanjay Lall of Stanford University focused on recent developments in the synthesis of optimal controllers in a stochastic decentralized setting. Mathukumalli Vidyasagar addressed the problem of model-order reduction through state aggregation for Markov processes. Alexandre Megretski of MIT discussed optimization-based robust system identification techniques for nonlinear systems. Keynote speaker Mustafa Khammash of the University of California, Santa Barbara, delivered a lecture in a two-hour marathon session, beginning with an in-depth introduction to biochemical reaction networks and the technical challenges they pose and concluding with an overview of computational approaches addressing some of these challenges. Keynote speaker Marija Ilic of Carnegie Mellon University focused her lecture on describing the prevalent hierarchical control approach for electric power systems and its associated limitations, along with a paradigm that takes into account responsive demand and the deployment of new technologies.

The daunting task of securing external research funding by newly minted assistant professors was addressed by three program managers from the NSF. Radhakisan Baheti (program director, ENG/ECCS) introduced the NSF’s dual mission of promoting research and education, described the NSF proposal review criteria, and highlighted emerging research areas in systems and control. Michael Branicky (program director, CISE/CNS and Case Western Reserve University) described funding opportunities for control systems research within the Directorate for Computer and Information Science and Engineering, and surveyed some of the projects recently funded by the cross-cutting NSF program on Cyber-Physical Systems (CPS).
a humorous and engaging presentation, Rajinder Khosla (program director, ENG/ECCS) explained the NSF proposal guidelines and proposal review process, and described the fundamental components of a winning NSF proposal. The full technical program and an archive of the talks are available at http://www.ece.jhu.edu/NECW2010.

The panel discussion “Careers in Control” was a highly interactive event. Four panelists were invited to share their diverse experiences with the audience; O. Pat Kreidl of BAE Systems and Keith Santarelli of BBN Technologies, formerly at Sandia National Laboratories, described their experience conducting research in industry and national labs, respectively, while Nuno Martins of the University of Maryland, College Park, shared his experience as a tenure-track faculty member. Drawing on his experience as a researcher and manager, Mathukumalli Vidyasagar emphasized the importance of perseverance and mentoring for a successful career. A Q&A session followed the presentations, drawing responses from both the panelists and the faculty members present in the audience, resulting in an informative and lively discussion.

The three-day workshop was successful in meeting its objectives, as evidenced by the overwhelmingly positive feedback received from participating students and post docs. The highly anticipated seventh installment of the workshop, organized by Nikhil Chopra (University of Maryland, College Park) and coorganized by Danielle Tarraf (JHU), will be held at the University of Maryland, College Park, in the spring of 2011.

Danielle C. Tarraf
Johns Hopkins University

Mom in the Loop

Time-operated traffic lights are one example of open-loop control, since what the lights do or even what the traffic does cannot affect the time mechanism that actuates the lights. A conventional automatic home laundry is another example of open-loop control, for the degree of dirtiness of the clothes does not affect the time they remain in the washer. On the other hand, when Mother washes the clothes by hand, she functions as a closed-loop system because the time she takes at the task and the vigor of her action are functions of the effectiveness of the washing operation.