Comments and questions for LIDS Symposium panels

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Control and optimization
I think that model-predictive control is the advanced control technique that has had the greatest impact on real-world applications, by far. Probably tens of thousands of MPC implementations are controlling various industrial processes today. In contrast, my impression is that the use of other advanced control techniques tends to be limited to the initial stages of design at best, with the control implementation ultimately being something like gain-scheduled PIDs. Is the panel aware of large-scale commercial success with advanced control, other than MPC?

Even MPC deployment has largely been limited to the process industries. However, in part as a result of the development of explicit MPC algorithms, interest in other application domains has increased. Do you see MPC as gaining broad cross-industry impact?

Networks and information
With the tremendous recent interest in smart grids, does the panel have any thoughts on the role of information, decision, and control technologies in this area? How can researchers in our fields get more involved?

It seems to me that most work in the "control of networks" area (as distinct from "control over networks") has been oriented toward one of a few broad problem classes—e.g., multivehicle coordination, sensor networks, systems biology. What are some relatively underexplored network systems for the controls community?

Estimation, inferencing, and learning
After a few decades of research in adaptive control, practical success—except for simple, heuristic approaches—continues to elude us. Is the panel optimistic about the future prospects for this field?

For the benefit of those in the audience who are not experts in estimation theory, what would you say have been the breakthrough results in the field over the last decade or so, from the perspective of enabling new applications?

Other questions
Are we as good, better, or worse at attracting the best students to information and decision systems now than we were when LIDS was established?

Has industrial interest in information and decision systems—in terms of interest in hiring students, sponsoring research, participating in conferences, etc.—waxed or waned over this time?