Laboratory for Information and Decision Systems

LIDS brochure custom folder - MIT
LIDS FACULTY
Bertsekas, Dimitri
Berwick, Robert
Chan, Vincent
Dahleh, Munther
Drake, Alcin
Deyst, John
Forney, David
Gallager, Robert
Massaroli, Steve
Médard, Muriel
Megretski, Alex
Mitter, Sanjoy
Modiano, Eyuan
Ozdaglar, Asuwan
Perillo, Pallo
Shah, Devavrat
Tsitsiklis, John
Vergese, George
Witsky, Alan
Win, Moe
Zheng, Lizhong

Vincent W. S. Chan
Director
Joan and Irwin M. Jacobs Professor of Electrical Engineering and Computer Science and
Aeronautics and Astronautics

Muriel Médard
Associate Director
Edgerton Associate Professor of Electrical Engineering and Computer Science

More information about the Laboratory for Information and Decision Systems can be found on
the web at http://lids.mit.edu/.
FUTURE OUTLOOK

The Laboratory has grown in faculty and student population by threefold in the last five years, with a commensurate amount of funding growth largely from the government sector. In the past few years, the Laboratory has also recruited three women and one minority faculty member. We will continue to target the recruitment of both junior and senior women and minority faculty members in the next few years, as we replace some of the retiring faculty. Additionally, our increasing participation in research agenda-setting in Washington and service to the engineering community allows us to influence the direction of research and enhances our ability to raise funds. The research themes of choice in LIDS are increasingly cross-disciplinary in nature, and we envision further collaborations with other MIT departments and laboratories as well as other leading universities.
State of the Institute Forum

Monday, May 3, 2004  2:00 - 4:00 pm
Kresge Auditorium

Speakers:
President Charles M. Vest
Provost Robert Brown
Exec. Vice President John Curry

Presented by: The Administrative Advisory Council II (AACII)

Postcard for MIT event
News

LIDS Professor’s Asu Ozdaglar and Devavrat Shaw win 2006 NSF Career Award.
In this issue:
An Interview with
Professor Robert Gallager
&
A student profile of
Erik Sudderth
vision research, notably in the special effects world, where filmmakers currently have to go “to crazy lengths,” says Erik, to manipulate images. Electronics companies are also interested in the development of “natural interfaces” with products like home televisions or computers. “This is the idea of being able to use images and video, and maybe speech, to let people interact with their computers in a more natural way, rather than having to use a keyboard and mouse.” Imagine being able to speak to your television, or have it recognize gestures you make. Of course, we’re not there yet, and Erik muses that “people don’t yet know exactly how audio and video should be used. There’s a sense that more natural interfaces would be useful, but the details haven’t yet been worked out.”

Erik himself didn’t know what he would focus on upon entering MIT. His first three years were funded by a fellowship that allowed him to explore a variety of research possibilities, which gave him freedom he describes as both good and bad. “It’s good because you get to pick something you’re interested in. But there are times when it’s a little daunting, because you’ve got to find something concrete that you can really make progress on.” He had worked in a computer vision lab during his undergrad years and knew he was interested in it, but his Master’s thesis “didn’t have anything to do with computer vision.” The diversity of study at the Institute and the flexibility and support of his advisers brought him around to his current PhD research, combining his previous interests with new problems. Erik’s most recent work, for which he presented findings at the LIDS Student Conference this January, is “hand tracking.” He starts with a three-dimensional geometric model of the hand, takes a video of someone moving their hand, and from that can “automatically extract what the hand is doing in 3D.”

As he looks back over his LIDS experience, Erik is enthusiastic about precisely this kind of intellectual freedom and exposure to new ideas that an MIT education affords. Among his most memorable moments at LIDS didn’t happen in Cambridge at all, but in Italy, at a physics and machine learning conference that he attended with Professor Forney. That experience fueled his ideas in the years that followed. Overall, he says, “[MIT] is a great environment in that you’re exposed to lots of these connections. Even if you don’t work on them directly, they float around in the back of your mind, where they may be useful some time in the future.”

That future brings Erik, like most of his fellow LIDS students, three main options upon graduation: postdoctoral research, teaching, or a position in a research lab. It isn’t sure which one is most appealing yet, though he affirms that the world of academia is where he wants to be in the long term. Because his wife will finish her graduate degree in ecology at Harvard, other considerations enter the picture. “We need to find a place where we can both find things we want to do. Because of those concerns I’m flexible.” No matter what the future holds, however, Erik knows he’ll miss the community at LIDS and MIT. “There’s such an interesting group of people who are really excited about what they’re doing. If you ask them about some problem you’re having, they’ll probably have a bunch of clever ideas for you. And that’s really great.”

Erik Sudderth is a member of Professor Alan Willsky’s Stochastic Systems Group and also works with Professor William Freeman, of CSAIL. For more information, you can access his website at http://seg.mit.edu/~esudderth/.

LIDS Journal - MIT
In this Issue:
THE BEAUTY OF THEORY & ENGINEERING ELECTRONS
What brings students to LIDS’ unique intellectual environment? Keith Santarelli and Danielle Tarraf, like most of their fellow PhD candidates, didn’t start their graduate student careers at MIT with a well-defined path of study. As Keith points out, at first most students will have identified a general research interest, such as “circuits vs. optics,” but won’t yet know their specialized area. Danielle adds, “This is one of the strong points of MIT. You have the avenues to explore to find your match.” That exploration brought both Keith and Danielle, independently, to the control systems group based on LIDS’
Laboratory for Information and Decision Systems

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