



## Newsletter, Summer 2007

### Message from the Director



A dynamic organization can expect to experience changes as it matures and evolves. Several faculty members have departed our organization to start initiatives and programs across the nation, including starting a new medical school. We are proud to be an incubator for national leaders as well as for technology. We are excited about our new hires, and we look forward to attracting additional faculty in the near future.

Recently, I was named Chair of the Department of Biomedical Informatics, and Director of Medical Informatics Services for New York-Presbyterian Hospital/Columbia. In addition to my role as CAIM Director, these assignments will allow for a perspective on needs and expertise that can serve the Center, department, university, hospital, and our industry partners.

Collaborations among our CAIM colleagues, including those in biomedical informatics, computer science, medical imaging, computational biology, and other units, has already grown in the past six months and will continue to grow and benefit all accordingly. Faculties in these departments are making impressive achievements as expected from this institution.

We will continue to work with and seek counsel from our External Advisory Board members and strive to enhance existing efforts to make the transition from academic research and development to commercial product efficient and valuable to all. Our commitment to the mission of NYSTAR, and the needs of the industries we serve, remains firm.

I look forward to working with you to achieve these goals and welcome your valued comments.

George Hripcsak, MD, MS

### Calendar

The External Advisory Board will meet on October 4, 2007 in the Merritt Conference Room (P&S Bldg.) at 3:00 PM. Edward Reinfurt, new Executive Director of NYSTAR has been invited.

### Kudos

The Chronicle of Higher Education has ranked the Columbia University Department of Computer Science as the second most productive PhD program behind

Stanford University. The rankings are based on grants, awards, citations and journal publications.

### Good CAT News

CAIM has received a renewal contract for another three-year award (2007-2010) from NYSTAR.\*

### People

Henning Schulzrinne, CAIM Co-Director and Chair of Computer Science, was elected vice chair of the Association for Computing Machinery's SIGCOMM, a forum for communications and computer networks.

Albert M. Lai is the new CAIM Assistant Clinical Director, as well as Associate Research Scientist in DBMI. Albert recently (2007) received his PhD in Biomedical Informatics (with distinction). He is also trained in computer science at Columbia (MS, 2001; BS, 2000). He was a National Library of Medicine Training Fellow (2002-06) where he worked on the use of remote display protocols and cognitive science methodologies to support remote training of elderly patients. Previously, he was a Research Assistant in the Network Computing Lab, Department of Computer Science.

### NEW BIOMEDICAL INFORMATICS FACULTY

Chunhua Weng (Assistant Professor) comes from the Department of Biomedical Informatics at the University of Pittsburgh where she was a Postdoctoral Associate in the Cancer Biomedical Informatics Grid program and Clinical Translational Science Award. She has a PhD in Biomedical Informatics (University of Washington, 2005), an MS in Information and Computer Science (University of California, 2002), and a BS in Computer Science, (Nankai University, P.R. China, 1997).

David Vawdrey (Associate Research Scientist) is a 2007 graduate of the University of Utah (Salt Lake City). He is also trained in computer science at Brigham Young University, Utah (BS, Computer Engineering, 2002; MS Computer Science, 2003), and has a Certificate in Human Factors, from the Department of Psychology at the University of Utah (2007). Previously, he worked at the LDS Hospital (Intermountain Healthcare), Department of Medical Informatics, Salt Lake City on data acquisition and evaluation from bedside medical devices. His research interests are in data processing and storage of physiologic signals, integrating bedside data sources with electronic medical records, and human factors and user interface design for computer applications in intensive care.

Noémie Elhadad (Assistant Professor) is trained in computer science, here and abroad. She received a PhD (2006) and an MSc (2001) from Columbia, and an engineering degree (1998) from Ecole Nationale Supérieure d'Electronique et Radioelectricite de Bordeaux, France. Since 2006 she has been an Assistant Professor in the Computer Science Department of The City College of New York. Her research interests are in natural language processing (statistical text generation), text summarization and user modeling.

Jason Shapiro (Postdoctoral Research Scientist, eff. 8/1/07) is currently a DBMI Postdoctoral Fellow. He is also Assistant Professor, Department of Emergency Medicine, Mt. Sinai School of Medicine (NY), and Assistant Attending, Department of Emergency Medicine, Elmhurst Hospital Center (Queens). Jason received a 2006-07 Pfizer Medical Informatics Training Grant. He has an MD (2000) from Columbia University College of Physicians & Surgeons (NY) and a BA (English, 1992) from the University of Iowa. He is licensed in New York and New Jersey and board certified in emergency medicine. His research interests include health information technology.

### Training

A short course entitled *Advances in Medical Imaging: Techniques, Applications, and Target Organs: The Four-Dimensional Future*, was held at the NY Academy of Sciences on April 19-20, 2007. The audience of physicians and scientists heard lecturers from various NYS institutions.



John Kender talking on *Feature Selection in Massive Databases and Organ Boundary Detection*

### Regional Partnership Program

In 2006, NYSTAR announced a state-wide competition for a Regional Partnership Program directed at high-tech economic development communities, businesses and entrepreneurs, private/public organizations, and academic institutions to commercialize technology. In early 2007, the Industrial and Technology Assistance Corporation (ITAC) organized a proposal from the New York City area, focusing on innovative technologies, including the biomedical sciences. Columbia University and CAIM provided input and letters of support. The RPP will be a natural

extension of ongoing collaboration between ITAC and Columbia/CAIM. Decisions on funding are expected by the end of 2007.

### Grant Program

Applications for 2007-08 industry-matched CAIM grants have been reviewed and approved, as follows:

- *Aetna IntelliHealth e-Health Development and Evaluation*, D. A. Albert, DDS, MPH, Dental Medicine/Community Dentistry [Aetna Dental]
- *Heart/Lung Sound Probe*, D. Jordan, MD, Biomedical Informatics [Philips Research]
- *Joint Philips-Columbia Development Program in Medical Imaging: Clinical Validation of Cardiac Strain Measures with Real-time 4D Ultrasound*, A.F. Laine, DSc, Biomedical Engineering [Philips Research]
- *Computer Aided Diagnosis of Lung Nodules Detected on CT Scans*, C. A. Powell, MD, Medicine [Philips Research]
- *Preventing Theft-of-Service in Large-Scale Voice-over-IP Deployments*, H. Schulzrinne, PhD, Computer Science, [Verizon Communications]
- *Machine Learning Algorithms and Applications to the Electric Power Grid*, D. Waltz, PhD, Center for Computer Learning Systems [Consolidated Edison]

### Events

On July 17, 2007 CAIM and Pfizer Health Informatics joined efforts to sponsor a *Metropolitan Area Medical Informatics Update*. Speakers included representatives from public and community agencies, industry, hospitals/medical centers, and academia. The program consisted of seven invited talks covering various aspects of healthcare, medical, and biomedical informatics with clinical, industrial, academic, and public health themes. Details and slide presentations can be found at [www.cat.columbia.edu/reports.htm](http://www.cat.columbia.edu/reports.htm).

The Center for Computational Biology and Bioinformatics held its *Annual MAGNet Retreat* in June 2007. MAGNet (National Center for the Multiscale Analysis of Genomic and Cellular Networks) uses knowledge- and physics-based methods to provide an integrative computational framework to organize molecular interactions. It is funded by the National Centers for Biomedical Computing and hosted at Columbia. Presentations are available online at: <http://magnet.c2b2.columbia.edu/retreats/07>.

For more information, call 212.305.2944 or visit [www.cat.columbia.edu](http://www.cat.columbia.edu)



**\*The Center for Advanced Information Management is a NYSTAR-sponsored Center for Advanced Technology.**