



DIRECTOR'S MESSAGE

This newsletter brings good and bad news. The bad news results from the consequences of the state's budget problems (see below). The good news is the ongoing progress of the Department of Biomedical Informatics (DBMI) and CAIM working to get Columbia technology and innovation into the commercial market. Partnering with small and large companies this past year (2007-08), CAIM reported to NYSTAR a total economic impact of \$33.5 million or a return on investment to the state of **33:1**. At the same time, we generated \$2.6 million in matching funds from these companies.

I am pleased to announce that one of our graduates, Albert Lai, accepted an assistant professor position at Ohio State University (see PEOPLE). Albert had stayed on at Columbia as Associate Research Scientist in DBMI, gaining skills in natural language processing and in technology transfer, working with the CAIM. We will certainly miss Albert's dedication, good work, and broad background, but we are pleased that other fine institutions continue to hire DBMI-trained specialists for their medical informatics programs.

Finally, our highly-regarded natural language processing technology - *MedLEE* - has been licensed to a new small company - NLP International (see COMPANY PROFILE). This valuable technology can now be used broadly elsewhere to improve healthcare delivery, as well as here at Columbia for additional development and applications.

In this issue, we highlight a DBMI-affiliated faculty member Jacqueline Merrill. A registered nurse and specialist in organizational management (OM) techniques, Jackie has a background in public health and has developed OM methods that can be used in non-medical applications in various industry areas.

As always, we welcome comments and suggestions.

George Hripcsak, MD, MS

NEW YORK STATE BUDGET PROBLEMS

The serious budget problems in New York State are affecting programs sponsored by our funding agency (NYSTAR) and, in particular, the Center for Advanced Technology (CAT) program. Our current (2008-09) budget was cut in August and again recently. We anticipate additional budget adjustments as state legislators and the Governor work to agree on program reductions and cuts going forward. The 2009-2010 Executive Budget proposed the elimination of NYSTAR and transfer of its programs to the NYS Economic State Development Corporation along with a significant reduction of the overall CAT program budget. These actions do not bode well for the CATs and other innovation-based economy initiatives. In response to this situation, CAT Directors and staff and their university government relations teams have

met with legislative staff members to present the case in support of the CAT program. Our External Advisory Board members as well as the heads of companies currently partnering on joint development projects have also acted. In late December, we submitted a package of information to the Governor and key legislative leaders consisting of about 20 solicited, but unscripted, letters from these leaders pointing out the immediate and long term benefits of the CAT program to the their organizations as well as the economy of the State. We continue to work with NYSTAR and other CATs to make the program's achievements known to the key policy makers and ensure continued support for commercializing technologies from CAT institutions.

INFORMATICS UPDATE

The second annual Medical Informatics Update was held on December 16, 2008 and again was graciously hosted by Pfizer at their NYC headquarters.



Informatics specialists from industry, business and government spoke on the topic *Getting Value in the EMR*. Speakers included George Hripcsak (Columbia University), James Tosone (Pfizer), Donald Rucker (Siemens Medical Solutions), Paul Conocenti (NYU Langone Medical Center), Farzad Mostashari, (NYC Department of Health and Mental Hygiene), Angelo DelParigi (Pfizer) Louis Cornacchia (Doctations), Daijin Kim (Pfizer), Peter Elkin (Mt. Sinai School of Medicine), Soumitra Sengupta (Columbia University), and William Schroth (Hudson Highland Advisors). A follow up questionnaire revealed a satisfying (85% excellent, 15% good) overall event rating and 100% interest in a repeat offering. The program and most of the speaker's media presentations can be viewed at http://www.cat.columbia.edu/whats_new.htm#informaticsupdate08 (See GALLERY)

COMPANY PROFILE

NLP International has found a ready market with strong interest for its EMR application tool *MedLEE™* (Medical Language Extraction and Encoding) since its formation late last year (see Fall 2008 Newsletter). It has recently signed the first commercial license agreement with a worldwide health care company. The company will initially evaluate and integrate *MedLEE's* technology for radiology reports and develop an interface to speech recognition. Licensing agreements with several hospitals and reseller partners in the EMR space are anticipated during the first quarter of 2009. A joint venture with an international pharmaceutical company is in an advanced stage.

NLP International is a new, small technology company licensing *MedLEE* from Columbia University. Its CEO is Bernhard Keppler a software entrepreneur who has previously founded and successfully built several software

companies including Interflex Data Systems, TimeLink International and Ellipson Data, a Westport, CT vendor of time reporting, payroll and human resource solutions for small and medium size customers.

CAIM GRANTS

A new grant application has been approved with a mid-year starting date. *Video and Image Retrieval and Analysis Tool (VIRAT)* will be directed by Dr. Shih-Fu Chang (Professor and Chair, Electrical Engineering Department) working with Kitware (Clifton Park, NY). Kitware recently received substantial funding from DARPA. The joint effort involves building a revolutionary video analyst workstation, and will leverage promising technologies in computer vision, video data indexing, and content-based retrieval.

FACULTY PROFILE

Jacqueline Merrill, RN, MPH, DNSc

Currently an Associate Research Scientist in the Public Health Informatics Faculty, Jackie is a public health nurse and public health services researcher. She has a doctorate in nursing science with a concentration in public health informatics. Her public health experience includes six years with the New York City Department of Health and Mental Hygiene, Bureau of School Health and Office of Nursing and Quality Improvement. She is former project director at the Center for Health Policy at the Columbia University School of Nursing. Dr. Merrill's research has been funded by a Pfizer Public Health Scholar Award, the Robert Wood Johnson Foundation, the National Institute of Nursing Research and National Library of Medicine



Her work takes a complex adaptive systems approach toward understanding public health systems by using of network analysis to improve performance in local public health organizations. She has established baseline network measurements for these organizations by developing a standardized survey methodology and taxonomy of the essential elements of public health work. These research products allow public health organizations to be compared as meta-networks based on standardized data. She has customized network analysis reports and measures to provide decision support for public health managers. In other studies she has applied network analysis to study the growth and development of scientific communities of practice. She is a collaborator in the New York City Center for Excellence in Public Health Informatics where she is applying network concepts of homophily and proximity to study a large scale implementation of electronic health records in underserved areas of NYC. This work is readily adaptable to business organizations both inside and outside of health care.

PEOPLE

Albert M. Lai, PhD – CAIM's Assistant Clinical Director - has accepted a position at Ohio State University. Effective January 1, 2009, he will be a Research Assistant Professor of Biomedical Informatics. In this new role Albert will serve as Associate Director of the CTSA (Clinical and Translational Science Awards) Biomedical Informatics Program at OSU. Part of his new research agenda will focus on telemedicine and usability of clinical and translational systems. We thank Albert for his valuable service to CAIM and wish him well in Ohio.



OUTREACH EVENTS

The Columbia CAT participated in two upstate economic development events. In September, CAIM displayed its technologies at the MedTechNY Annual Conference which took place at "The Lodge" at Welch Allyn in Skaneateles, NY. Entitled *Growing, Changing, Booming: Adapting Healthcare to the Needs of an Aging Population*, the conference brought together over 250 industry, academia, and government leaders to discuss the challenges and opportunities coming to healthcare in the near future.

In October, CAIM was invited to attend and participate in the University of Rochester's Center for Electronic Imaging Systems annual dinner and board meeting. This highly anticipated and well-attended annual event provided an opportunity to increase CAIM's reach upstate, meet with a number of new businesses as well as NYSTAR staff including executive director Edward Reinfurt who gave a keynote address.

GALLERY - 2008 Medical Informatics Update



Farzad Mostashari,
New York City Department of
Health and Mental Hygiene.

Louis G. Cornacchia
Doctations, Inc.



Frances Morrison (Columbia University),
Michael Cantor (Pfizer),
John Chelico (NYU Medical Center), &
George Hripcsak (Columbia University)

For more information, call 212.305.2944 or visit www.cat.columbia.edu.