



School of Medicine
University of Missouri-Columbia

Office of the Dean

MA204 Medical Science Building
1 Hospital Drive, DCO18.00
Columbia, Missouri 65212
Phone (573) 882-1566
Fax (573) 884-4808

July 13, 2007

National Security Agency
Attn: Ms. Christine Nickell, I02E
9800 Savage Road, SAB 3, Suite 6744
Fort Meade, MD 20755-6744

Dear Ms. Nickell:

This letter addresses Criteria 10 for the Center of Academic Excellence application being submitted by the University of Missouri - Columbia. Within the School of Medicine, we have six full time faculty members teaching and conducting research in information assurance (IA) related areas. We have four additional adjunct faculty members who address IA in the various graduate classes they teach. These faculty hold appointments in the Department of Health Management and Informatics (HMI) in the School of Medicine.

The Department of Health Management and Informatics offers a variety of classes directly related to IA, as part of the curricula for two Master's degree programs in Health Informatics (HI) and Health Services Management (HSM), and a Ph.D. program in Health Informatics. HMI 8435: Information Security and Policy, in particular, is devoted to many of the core concepts of IA and is required of all professional HI students and available to medical students and students from nursing and the health professions. There are many other courses that address IA content, including Design and Management of Healthcare Information Systems (7430), Enterprise Information Architecture (7443), Decision Support in Health Care Systems (8571), and Knowledge Management in Health Care (8478).

In addition to teaching, HMI faculty and students engage in numerous IA related research projects. Faculty and students produce peer reviewed publications, present nationally and internationally, and provide leadership in the application of IA principles to health care information systems. Just as critical, HMI master's program graduates provide leadership in health care delivery in the full range of professional roles, from doctors and nurses providing care directly to patients, to CEO's and CIO's who manage the organizations and information systems driving the industry.

In addition to teaching and research, the department carries our technology transfer projects with health institutions, where clinical faculty lead in providing technical assistance to health institutions throughout the state. Projects include developing information infrastructure in rural communities integrating various health institutions and professionals. These projects are facilitated by the Center for Applied Health Informatics.

We currently have six full time faculty members engaged in teaching and researching IA related issues, and are actively recruiting for two open positions. Current faculty members include:

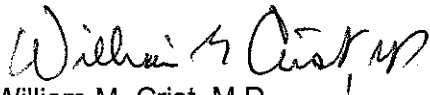
- **Patricia Alafaireet**, MHA, Director of Applied Health Informatics. Graphical user interfaces for physicians use and in the visual representation of data specifically designed to support physician practice. Her most recent IA related publication is "User Interface: Needed Design Characteristics for Successful Physician Use." Information & Communications Technology, 2006. ITI 4th International Conference. She teaches the course "HMI 7430: Design and Management of Healthcare Information Systems."
- **Suzanne A. Boren**, PhD, Assistant Professor of Consumer Health Informatics and Research Health Scientist with the Health Services Research & Development Program of the Harry S. Truman VA Hospital in Columbia, Missouri. Dr. Boren conducts a variety of health care research projects, including randomized clinical trials, meta-analyses, and systematic reviews on the practical value of various decision support technologies including peer-comparison feedback, reminders, telemedicine/distance technologies, computerized information services, interactive computerized patient education, cost analyses of clinical interventions, computerized management of chronic illness, and evidence-based patient education in chronic care. Her professional experience and peer-reviewed publications in health care emphasize the areas of continuous quality improvement and research methodology. Dr. Boren has edited the proceedings of an international conference focusing on the transfer of research evidence to improve health care practices and has chaired the organizing committee of a conference to advance the business case for technological innovation that improves outcomes and protects patient safety. Dr. Boren teaches the course "HMI 8450: Methods of Health Services Research."
- **Yang Gong**, MD, PhD, Assistant Professor, currently focuses his teaching and research interests in the areas of clinical decision support systems, human-computer interaction, medical error intervention, health data representation, and information storage and retrieval. Examples of Dr. Gong's recent research publications include: "Clinical communication ontology for medical errors" (Medinfo 2007); "A human-centered design and evaluation framework for information search" (American Medical Informatics Association 2005 Annual Conference Doctoral Consortium); "Distributed information analyses for information search tasks" (Proceedings of the AMIA Annual Symposium 2005). Dr. Gong teaches the course "HMI 8571: Decision Support Systems for Health Care."
- **Lanis Hicks**, PhD, Professor, is a health economist with research interests in telemedicine and economic evaluations. She has focused on evaluating the cost-effectiveness of technologies in the delivery of health care, including telemedicine. In recognition of her contributions, Dr. Hicks was the recipient of the 1999 National Rural Health Association's Distinguished Researcher award. Recent IA related publications include "Assessment of Patients' Acceptance of and Satisfaction with Teledermatology" (Journal of Medical Systems 28(6): 575-579) and "Using Telemedicine to Avoid Transfer of Rural Emergency Department Patients" (Journal of Rural Health 17(3): 220-228). Dr. Hicks teaches the course "HMI 7524: Health Economics."
- **Mihail Popescu**, PhD, Assistant Professor in HMI and Adjunct Assistant Professor in Computer Science (School of Engineering), focuses his research on ontologies and information systems in bioinformatics. Recent publications include "Fuzzy Spatial Pattern Processing Using Linguistic Hidden Markov Models" (IEEE Transactions on Fuzzy Systems, February 2006) and "OntoQuest: A Physician Decision Support System based on Ontological Queries of the Hospital Database" (AMIA Fall Symposium, November 2006). Dr. Popescu teaches the course "HMI 8441: Controlled Terminologies."

- **Illhoi Yoo**, PhD, Assistant Professor, conducts research in data warehousing and data mining using biomedical ontologies. Dr. Yoo's dissertation was awarded "Most Likely to Enhance Drexel's Reputation" by Drexel's Dissertation Award Committee. In 2004, he won Best Paper from the IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology. Dr. Yoo's most recent publications include "A Coherent Graph-based Semantic Clustering and Summarization Approach for Biomedical Literature and a New Summarization Evaluation Methods" (Bioinformatics 2007) and "Biomedical Ontology Improves Biomedical Literature Clustering Performance: A Comparison Study" (International Journal of Bioinformatics Research and Applications 2007). Dr. Yoo teaches the course "HMI 7437: Data Repositories and System Integration."

Adjunct faculty members from the department who are actively engaged in IA activities include:

- **Andrew Grant**, MB, ChB, MRCP, FRCPC, DPhil, is Professor in the Medical School of Université de Sherbrooke, Québec. Dr. Grant teaches the course "HMI 8478: Knowledge Management in Health Care."
- **Michael Harris** is the System Security Analyst for University Of Missouri Health Care. He currently teaches the course, "HMI 8435: Information Security and Policy."
- **Jeremiah Sable**, MD, MHA, leads health informatics efforts for the state of Vermont as Public Health Physician, Health IT, Vermont Department of Health. Dr. Sable teaches "HMI 7443: Enterprise Information Architecture."

Sincerely,



William M. Crist, M.D.
Hugh E. and Sarah D. Stephenson Dean
School of Medicine