Yi Hong, Ph.D.

Education   PhD, Biomedical and Health Informatics, Department of Electrical Engineering and Computer Science, University of Wisconsin-Milwaukee (UWM), 2012
MLIS, School of Information Studies, University of Wisconsin-Milwaukee, 2001

Certificates   Medical Informatics Short Course, Stanford University, 2004
Medical Terminology 350, Dean Vaughn Learning System, Medical College of Wisconsin, 2004
Technical Training of Red Hat Linux, Chicago, 2002

Professional Experience

Adjunct Professor, 2018 - Present
School of Information, Kent State University
- Engaged in teaching and research on health informatics, biomedical controlled vocabularies and healthcare terminologies
- Courses taught: Standardized Terminologies in Healthcare

Integration Data Architect, 2014 – Present
Department of Professional Services, MedeAnalytics, Inc.
- Providing clinical expertise in developing common data model with standardized healthcare terminologies and Clinical Document Architecture (CDA)
- Developing biomedical terminology services and data transformation services, codifying and mapping site-specific clinical data with standard terminologies
- Working with clients on data mapping and analysis to implement and deliver healthcare data analytics products

Clinical Informatics Analyst, 2010 – 2014
Department of Research and Development, Harris Corporation - Healthcare solutions
- Conducted research on electronic medical records (EMR) applications, controlled biomedical vocabularies, and clinical decision support systems
- Developed vocabulary services and data transformation services, codifying and mapping site-specific clinical data with standard terminologies such as ICD, CPT, SNOMED CT, LOINC, and UMLS
- Created common data model with HL7, CDA, and other healthcare data standards
- Conducting clinical data and language processing, health data and text mining, data mapping and functional testing
- Analyzed healthcare and technical processes and systems to formulate and develop recommendations for complex clinical applications to meet client and/or internal project requirements
- Worked with clients to prioritize development initiatives and activities, create queries to pull data from client databases according to functional requirements of provider portal, patient portal, and other applications
- Provided healthcare and information technology expertise in identifying, evaluating and developing systems and procedures that optimize the acquisition, storage, retrieval and use of clinical information

RSNA Reporting Template Librarian, 2009 – 2010
Radiological Society of North America (RSNA)

- Worked on a research project funded by RSNA and National Institute of Biomedical Imaging and Bioengineering (NIBIB)
- Participated in developing a digital library of radiology reporting templates based on metadata and the standard imaging terminology RadLex
- Transformed radiology reporting templates from text format to XML-encoded ones
- Mapped elements of radiology reporting templates to RadLex terminology; Analyzed mapping results with statistical and information visualization methods

Clinical Systems/Information Specialist, 2001 – 2010
Office of Clinical Informatics (OCI), Medical College of Wisconsin (MCW)
- Conducted analytical research on clinical informatics, health information services, and information-seeking behavior by incorporating data from newsletter subscribers, web server logs, statistics, and external sources
- Managed MCW HealthLink web site, physician database, online physician directory, and OCI web site; Engaged in system administration and web site redesign with MCW Faculty Collaboration Database and Froedtert Hospital's physician web search
- Designed and produced routine and customized system reports to assist clinicians and management groups in obtaining information and supporting the decision making
- Involved in EpicCare electronic medical record testing, MyChart patient portal implementation, and EPIC newsletter publication
- Assessed usability of standardized terminologies within the EPIC system
- Worked closely with clinicians and vendors to effect appropriate and timely decisions on application functionality and workflow integration

Project Assistant, 1999 - 2001
School of Information Studies, University of Wisconsin-Milwaukee
- Worked on projects including analyzing queries submitted to Internet search engines, performed statistical analysis of user studies, created database for multicultural librarianship studies
- Supported faculty's information requests and assisted professors with onsite and online courses

Honors and Awards

- New Investigator Award, Society for Imaging Informatics in Medicine, 2011
- Graduate of the Last Decade Award, University of Wisconsin-Milwaukee, 2005
- Beta Phi Mu, International Library and Information Studies Honor Society, 2001
- National Conference on Asian Pacific American Librarians Scholarship, 2001

Research Projects and Grants

- NIBIB-RSNA RadLex Project Supplement - Incorporating RadLex into Radiology Reporting Templates, funded by National Institute of Biomedical Imaging and Bioengineering, Project member, 2011-2012

- Best-Practice Structured Radiology Reporting, funded by Radiological Society of North America (RSNA), Project coordinator, 2009-2011

- ClinicLink: Access to Online Consumer Health Information, funded by the National Library of Medicine Internet Access to Digital Libraries Grant, Co-principal investigator, 2002-2004

Publications

Peer-reviewed Journal Articles

Zeng L, Hong Y, Clunis J, He S, & Coladangelo LP. 2020. Implications of Knowledge Organization Systems for Health Information Exchange and Communication during the COVID-19 Pandemic. *Data and Information Management*, 4(3): 148-170, 2020. Available at https://doi.org/10.2478/dim-2020-0009

Hong Y, Zhang J. Investigation of Terminology Coverage in Radiology Reporting Templates and Free-text Reports. *International Journal of Knowledge Content Development & Technology*, 5(1): 5-14, 2015.

Hong Y, Zeng L, Zhang J, Dimitroff A, Kahn CE Jr. Application of Standardized Biomedical Terminologies in Radiology Reporting Templates. *Information Services & Use*, 33(3-4): 309-323, 2013.

Hong Y, Kahn CE Jr. Content Analysis of Reporting Templates and Free-text Radiology Reports. *Journal of Digital Imaging,* 26: 843-849, 2013.

Hong Y, Zhang J, Heilbrun ME, Kahn CE Jr. Analysis of RadLex Coverage and Term Co-occurrence in Radiology Reporting Templates. *Journal of Digital Imaging*, 25(1): 56-62, 2012.

Zhang J, An L., Tang T, Hong Y. Visual health subject directory analysis based on users' traversal activities. *Journal of the American Society for Information Science and Technology*, 60(10):1977-1994, 2009.

Zhang J, Wolfram D, Wang P, Hong Y, Gillis R. Visualization of Health-Subject Analysis Based on Query Term Co-occurrences. *Journal of the American Society for Information Science and Technology*, 59(12):1933-1947, 2008.

Hong Y, Zhang J. The Dewey Decimal Classification in China. *Knowledge Organization*, 23(4), 1996.

Hong Y. Indexing Language, New Progress in China. *Knowledge Organization,* 22(1), 1995.

Refereed Conference Articles

Hong Y, Zeng L, Zhang J, Dimitroff A. Application of Standardized Biomedical Terminologies in Radiology Reporting Templates. *Proceedings of International Society for Knowledge Organization UK Biennial Conference*, London, UK, July 2013.

Hong Y, Kahn CE Jr. Content Analysis of Reporting Templates and Free-text Radiology Reports. *Proceedings of Society for Imaging Informatics in Medicine Annual Conference (SIIM 2012)*, Orlando, FL, June 2012.

Hong Y, Bulbul SB, Kahn CE Jr. Evaluation of RadLex coverage of radiology reporting templates. *Proceedings of Society for Imaging Informatics in Medicine Annual Conference (SIIM 2011)*, Washington, DC, June 2011.

Bulbul SB, Hong Y, Kahn CE Jr. RELAX-NG encoding of radiology report templates. *Proceedings of Society for Imaging Informatics in Medicine Annual Conference (SIIM 2011)*, Washington, DC, June 2011.

Hong Y, Ehlers K, Gillis R, Patrick T, Zhang J. A Usability Study of Patient-friendly Terminology in an EMR System. *Proceedings of the 13th International Congress on Medical Informatics (MedInfo 2010)*, Cape Town, South Africa, September 12 – 15, 2010.

Hong Y, Zhang J. Consumer Health Information Resources on the Internet: A Search Query Analysis and Study of User's Information Needs. *Proceedings of Multilevel, multicultural & multiethnic information society*, Kunming, China, November 16-17, 2009.

Hong Y, Patrick T, Gillis R. Protection of Patient's Privacy and Data Security in E-Health Services. *Proceedings of International Conference on BioMedical Engineering and Informatics*, Sanya, Hainan, China, May 27-30, 2008.

Hong Y. The Role of Classification in the Information Organization under the Networking Environment. *Proceedings of 6th International Study Conference on Classification Research*, London, June 16-18, 1997.

Presentations

Hong Y, Zeng L. Implications of the Major Health KOSs During the COVID-19 Pandemic, A review of their efforts, coding guidelines, and usages. *Networked Knowledge Organization Systems (NKOS) Consolidated Workshop*, September 2020.

Collins B, Hong Y. Results of mapping Report elements to Radlex. RSNA Reporting Committee Meeting, Chicago, February 2012.

Hong Y, Heilbrun ME, Rubin DL, Langlotz CP, Bozkurt S, Kahn CE Jr. Integrating Medical Ontologies into Radiology Reporting Templates. *Radiological Society of North America Annual Meeting (RSNA 2011)*, Chicago, IL, November 2011.

Hong Y, Zhang J, Meng X, Kahn CE Jr. Using a Visualization Technique to Represent Information in Radiology Reporting Templates. *Radiological Society of North America Annual Meeting (RSNA 2011)*, Chicago, IL, November 2011.

Kahn CE Jr, Bulbul SB, Hong Y, Langlotz CP. Best-practices radiology reporting: RSNA's library of radiology report templates. *Radiological Society of North America Annual Meeting (RSNA 2010)*, Chicago, IL, November 2010.

Kahn CE Jr, Hong Y, Langlotz CP, Rubin DL. Encoding radiology report templates with RadLex® terms. *Radiological Society of North America Annual Meeting (RSNA 2010)*, Chicago, IL, November 2010.

Kahn CE Jr, Bulbul SB, Hong Y, Langlotz CP. Design and Implementation of a Library of Radiology Reporting Templates. *Radiological Society of North America Annual Meeting (RSNA 2009)*, Chicago, IL, November 2009.