University of Victoria

# School of Health Information Science Seminar Series

## Dr. Sina Madani Presents: Practical Applications of Ontologies within EMR Systems

Wednesday, November 17th, 2021
12:00 pm – 1:00 pm Pacific
Online via Zoom

**Abstract:**

The promise of Electronic Medical Record (EMR) systems is to provide a platform for integrating providers' workflow as well as collecting and managing patient information efficiently for the purpose of increasing quality of care. However, accurate aggregation of clinically relevant data requires semantically meaningful mappings that rely on clinical ontologies and terminologies. Without such terminology bindings, users of EMR systems may unintentionally cause ambiguity in patient data, by escaping formalism, and pose a significant risk to patient safety. Therefore, representing and recording patient data, coded with clinical terminologies, can dramatically enhance unambiguous data capture and extraction, knowledge base creation, and immediate access to the patient data. Furthermore, leveraging ontologies within clinical applications can improve the effectiveness of knowledge engineering activities, increase reliability of clinical communications, and facilitate interoperability of computer systems by providing a common understanding of biomedical data.

**Dr. Sina Madani**, MD, PhD is a clinical informatician at the department of HealthIT, Vanderbilt University Medical Center. He received his MD from Shahid Beheshti University of Medical Sciences, Tehran, Iran and his PhD from The University of Texas Health Science Center at Houston, TX. He is a current fellow of the American Medical Informatics Association.

He started his informatics career at Vanderbilt University Medical Center, department of Health Informatics Technologies in 2003 focusing on structured clinical documentation & reporting, interface terminologies, clinical data modeling, and enterprise terminology services. He continued his career at the University of Texas MD Anderson Cancer Center, department of Clinical Analysis & Informatics (2008-2016) focusing on natural language processing , enterprise ontology services, and data governance in cancer domain. He currently works on data standardization, knowledge engineering, and natural language processing as they apply to automated phenotyping, clinical decision support systems, and knowledge management within Electronic Medical Record systems.

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