Abstract:
Clinical decision support systems (CDSSs), when effectively implemented and integrated with electronic health records (EHR) systems, are an integral part of health information technology. One of the unforeseen downfalls of current CDSSs is a phenomenon known as alert fatigue, which occurs due to the overwhelming number of alerts received by clinicians. Many of these alerts are overridden due to their lack of usefulness and accuracy. CDSSs function is dependent upon the medical knowledge present within the EHR, and the readily accessibility of that knowledge. Some CDS developers and researchers have turned to using clinical ontologies to organize the medical knowledge to improve CDS function. However, the representation of clinical reasoning within the ontologies are still not prevalent. This presentation will discuss the findings from a systematic review of the clinical reasoning ontology (CRO) based CDSSs including the concepts and properties identified within these ontologies, and how the findings of this systematic review could guide the future research in medical knowledge presentation in ontologies.