Abstract:

Epidemiologists, public health authorities and researchers need to collect data from several resources, foster the collection of surveillance data in a consistent and comparable way across jurisdictions to estimate the incidence and prevalence of different health conditions, as well as related risk factors for a specific population. To improve the planning and evaluation of disease prevention interventions and to assist multiple stakeholders and decision-makers in making correct and unbiased inferences about population health, several data and analytical issues should be addressed. One of the main challenges in monitoring and measuring population health is the extraction and integration of massive amounts of heterogeneous health and non-health data from multiple distributed sources. In this talk I will discuss the use of Health Intelligence and Semantic [BigData] Analytics, a mechanism for capturing, analyzing and inferring contextual knowledge from large datasets, to collect, integrate, track, and share data for disease surveillance and public health intervention design and evaluation.

Bio:

Arash Shaban-Nejad is an Assistant Professor in the UTHSC-OAK-Ridge National Lab (ORNL) Center for Biomedical Informatics, and the Department of Pediatrics at the University of Tennessee Health Science Center (UTHSC). He is also an adjunct faculty at the Bredesen Center for Interdisciplinary Research and Graduate Education, at the University of Tennessee, Knoxville. Before coming to UTHSC, he was a Postdoctoral Fellow of the McGill Clinical and Health Informatics Group at McGill University. Dr. Shaban-Nejad received his Ph.D. and MSc in Computer Science from Concordia University, Montreal and Master of Public Health (MPH) from the University of California, Berkeley. Additional training was received at the Harvard School of Public Health. His primary research interest is Population Health Intelligence, Epidemiologic Surveillance and Big-Data Semantic Analytics using tools and techniques from Artificial Intelligence, Knowledge Representation, and Semantic Web. Dr. Shaban-Nejad is currently the principal investigator in a global health and development research project for malaria elimination, funded by Bill & Melinda Gates Foundation, and an associate editor of BMC Medical Informatics and Decision Making and a guest editor of Nature – Digital Medicine.