Biomedical and Health Informatics Series
Tuesday, May 15th, Room T-739, 12:00-12:50

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"A (more) Modest Semantic Web for the Modern Biologist"

Modern biology research requires informatics methods and knowledge sharing. There are too many publications, too much data available, and many research advances rely on finding connections across multiple knowledge sources. Berners-Lee's vision for the semantic web was written in the ambitious language of AI, with intelligent agents somehow connecting up web resources across an extremely wide spectrum of everyday, common-sense application domains. In this talk, I will present a somewhat more modest vision of the semantic web, motivated purely by two examples from modern biology research. The first example is around the state-of-the art for pathway representations: knowledge sources such as Reactome, KEGG, and BioCYC, and standards such as BioPAX. The second example is around research in bio-simulation and standards and libraries such as SBML, CellML and JSim. For both domains, I will describe the benefits and value of semantic interoperability in terms of the capabilities and sorts of queries that could be answered by the modest semantic web we envision. A critical component of this vision is the role of ontologies, and especially reference ontologies that connect multiple knowledge sources.

John Gennari, Ph.D. received his doctorate in Computer Science (in artificial intelligence) in 1990, and has been carrying out research in biomedical informatics since 1994, when he began working as a research scientist in the Stanford Medical Informatics group. His primary research focus is in knowledge representation and especially knowledge sharing. John is extensively published in the Biomedical Informatics literature, in application areas as diverse as clinical trial protocol management, health care guidelines, and cell-signaling pathways. In addition, he has published in computer-supported collaborative work (with a medical informatics application), and has helped lead the Knowledge Capture conferences, including a turn as conference co-chair in 2003.

The Biomedical and Health Informatics lecture series covers current topics and developments in Biomedical and Health Informatics. Presenters include faculty, students, researchers and developers from the University of Washington, other academic institutions, government, and industry (locally and nationally). The intended audience is the broader University of Washington and Seattle area community with an interest in BHI as well as BHI faculty and students.
Series Website: http://courses.washington.edu/mebi590/