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College of Arts & Sciences

MARQUETTE UNIVERSITY

Department of Mathematics, Statistics and Computer Science

SPECIAL COLLOQUIUM ANNOUNCEMENT

Translational Bioinformatics:
How data science and machine learning are linking the
molecular world
to the clinical world

Natalia Khuri

Department of Bioengineering
Stanford University

1:00 p.m., Tuesday, January 22, 2019

Abstract

Major discoveries in life sciences and breakthrough technologies are generating unprecedented amounts of data and opportunities for researchers, healthcare providers, drug developers and regulators. In this talk, I will describe how data mining and machine learning can be used to collect, store, and analyze data from public sources to support decision making in the drug discovery process, improve clinical practice and avoid unwanted side effects. I will then show how these methods can be extended to predict and better understand how drugs affect the human body. Next, I will discuss how structural bioinformatics can lead to higher accuracy of such predictors. Finally, I will show how we intend to integrate these results with biomedical text extraction with the aim of providing better information about drug response and interactions.

Bio

Natalia Khuri's research interests are in the application of data mining and machine learning technologies to problems relevant to human health. She is particularly interested in methods for understanding drug actions at the molecular, cellular, organism and population levels, including how genetics impacts drug disposition and response. Natalia is a recipient of an NSF Research Opportunity award, an ARCS award and UCSF's Discovery Fellowship award. She is currently holding a Lecturer position at Stanford University and Adjunct Assistant Professor position at University of California San Francisco (UCSF). Natalia is the Education Program Director at the joint UCSF-Stanford Center of Excellence in Regulatory Science and Innovation.

1313 W. Wisconsin Avenue, Cudahy Hall, Room 401, Milwaukee, WI 53201-1881
For further information http://www.mscs.mu.edu/mscs/resources/colloquium.html or
contact Dr. Debbie Perouli at #414-288-3889, despoina.perouli@marquette.edu

POST-COLLOQUIUM REFRESHMENTS SERVED IN ROOM 342 AFTER 2:00 P.M.