

4:00 p.m. BU 307

Wazir Muhammed, Ph. D., Assistant Professor, Physics, Florida Atlantic University

**Data Mining in Radiation Oncology**

**Abstract:** The presentation is about the data mining leading to a big data in radiation oncology. The possible sources of big data in radiation oncology will be briefly discussed. Tracking of organ doses in radiation therapy for patient safety will be introduced and explained in a big data perspective. In doing so, the **Personal Organ Dose Archive** (PODA) will be described. Different components of PODA particularly, the Monte Carlo dose engine (i.e., Particle Transport in Media) will be described. To describe the role of big data in radiation oncology, prediction and stratification of pancreatic cancer by using personal health data through Artificial Neural Network (ANN) will be presented. At the end, possible role of big data and challenges in data mining will be briefly discussed.