

# SE&T Colloquium Series-Fall 2015

Speaker	<p>Dr. Ana Djuric Department of Engineering Technology Wayne State University</p> <p>Host: Dr. Andy Pandian</p>
Title	<p><b><i>Design and Analysis of Industrial Robots for Advanced Manufacturing Systems</i></b></p>
Abstract	<p>Contemporary manufacturing systems are still evolving. The system elements, layouts, and integration methods are changing continuously, which require design and analysis of Industrial Robots for their integration in Advanced Manufacturing Systems. Our goal is to use robot kinematics and dynamics theory to model, analyze, validate and visualize different robotic systems. The Matlab/Simulink and Maple 17 tools are used for the calculation. Currently we have three robots that we use for the experimental work: Fanuc S430 iw, Fanuc 200 ic and Baxter ® (collaborative robot). The design and analysis of those robots are used to demonstrate different modeling methods and validation procedures. The power of reconfigurable modeling approach is presented to show a great design tool which is used to avoid singular configurations, minimize the kinematic and dynamic complexity and select the best Workspace and Work-Window for desired applications.</p>
Date	<p>Tuesday, October 13</p>
Time	<p>4:10-5:00pm</p>
Place	<p>Pioneer 240</p> <p>Refreshments will be served at 4:00pm.</p>