



Department of Automatic Control & Systems Engineering  
would like to announce the following seminar:

## **Incorporating Uncertainty in Neuro Control**

*Speaker: Dr. Randa Herzallah*

**Al-Balqa' Applied University  
Faculty of Engineering Technology  
Mechatronics Engineering Department  
Jordan**

**Friday 18th July 2008  
at 11:00**

**Location: Sir Henry Stephenson Building LT2**

Coffee and Biscuits will be served afterwards.

**Abstract:** Modern advances in technology have led to more complex manufacturing processes whose success centres on the ability to control these processes with a very high level of accuracy. Plant complexity inevitably leads to poor models that exhibit a high degree of parametric or functional uncertainty. The situation becomes even more complex if the plant to be controlled is characterized by a multi-valued function or even if it exhibits a number of modes of behaviour during its operation. Since an intelligent controller is expected to operate and guarantee the best performance where complexity and uncertainty coexist and interact, we have recently developed new control techniques under the framework of intelligent control to enhance the performance of the controller for more complex and uncertain plants. These techniques are based on incorporating model uncertainty. The new developed control algorithms for incorporating model uncertainty are proven to give more accurate control results under uncertain conditions. In this talk we present some of these approaches that appear to be promising for enhancing the performance of intelligent control systems in the face of higher levels of complexity and uncertainty.