



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

***Robotic Closed Elastica: Mechanistic Functions generated  
by Bodily Flexibility***

***Speaker: Professor H.Mochiyama***

**Flexible Robotics Laboratory  
Department of Intelligent Interaction Technologies  
University of Tsukuba, Japan**

**Wednesday 6 February 2008  
at 14:10**

**Location: St Georges Mappin Building LT6**

Tea and Biscuits will be served afterwards.

**ABSTRACT**

In this talk, a novel robotic element named "Closed Elastica" and its applications to robotic tasks will be introduced. One of the typical types of closed elastica is just a bended elastic strip whose ends are connected with two rotational joints. By driving one joint back and forth, we can easily obtain repeated impulsive motions with very high acceleration caused by the snap-through buckling of the elastic object irrelevant to the driving speed of the joint. This novel robotic element can be utilized for powering robot moving like creatures. As application examples, novel swimming and jumping robots based on the closed elastica will be shown.