

**9<sup>th</sup> Seminar on Mechanical Science and Bioengineering**  
**Graduate School of Engineering Science, Osaka University**  
**Seminar Room J308**  
**16:00- 17:00, Tuesday, November 14, 2006**

## **CellML and the IUPS Physiome Project**

Dr. David Nickerson  
Division of Bioengineering, Faculty of Engineering  
National University of Singapore

In this presentation I will provide a brief introduction to the IUPS Physiome Project (<http://www.physiomeproject.org>) and the CellML project (<http://www.cellml.org>). I will then describe how CellML can be used to provide generic descriptions of mathematical models for various components of a multiscale and multiphysics model, primarily through the use of examples in modelling cardiac electromechanics.

I will then proceed to discuss some recent developments and achievements in the CellML project, such as the CellML 1.1 API and its use; mathematical model curation; the role of CellML in model curation (especially in regard to CellML metadata and the recently proposed simulation and graphing metadata specifications); and the CellML model repository. Where relevant I will tie these developments back to the goals and future directions of the IUPS Physiome Project.