

**Petra University**

(Private Accredited University )



Faculty of Information Technology

**جامعة البتراء**

(جامعة خاصة معتمدة)

كلية تكنولوجيا المعلومات

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The Faculty of Information Technology, University of Petra, and the Committee for Scientific Research and Qualifications Enhancement at the FIT, have the pleasure to invite you to the Seminar:

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**“The Use of Graph Theory for the Representation of Kinematic Structures of Mechanisms, and the Re-Use of Existing Structures for the Synthesis of New Designs in different Domains of Expertise”**

By

**Dr Ghassan Issa, FIT**

**Monday 8 of March 2010, 13:00-14:30  
(UOP-Library Seminar Room)**

Reasoning about Engineering Design Problems requires sufficient understanding of the nature of Engineering Design (conceptual level) as well as developing a suitable knowledge representation to capture both structural and functional requirements. This seminar introduces to the basics of Engineering Design Process, the concept of kinematics structures, and a knowledge representation methodology using graphs and rule-based system to capture the structural and functional requirements. This representation methodology is then employed in a multi-level system capable of re-using past experience for the development of new designs in different domains using Analogical Reasoning.

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## Program

**Reception (12:45-13:00)**

**Welcome & Opening Note (13:00-13:05)**

**The Presentation (13:05-13:55)**

**“The Use of Graph Theory for the Representation of Kinematic Structures of Mechanisms, and the Re-Use of Existing Structures for the Synthesis of New Designs in different Domains of Expertise”**

*(Dr Ghassan Issa, Faculty of Information Technology, Petra University)*

**Discussion & Recommendations (13:55-14:20)**

**Invitation to Coffee & Tea Break and end of the Seminar (14:20)**

### **Location:**

**Faculty of Information Technology Meeting Room 4<sup>th</sup> Floor**

**Room Nr. : 7401**