



**Dose Determination at Jordan Sub-Critical Assembly (JSA)
BY**

- 1- ALA'A YACOUB AL-DAMEN**
- 2- HUSSEIN HASAN AL-NAAMEEN**
- 3- OSSAYD ZAKARIYA RABABAH**

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Principal Supervisor

Dr. SALAHEDDIN MALKAWI

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Abstract

Jordan Subcritical Assembly (JSA) is the main education, training and research facility at the Department of Nuclear Engineering at Jordan University of Science and Technology (JUST). It is located among other buildings at JUST. Only JSA operators, Nuclear Engineering Department faculty members and students can enter to the facility, other students and workers pass by its building.

The work presented in this report is an evaluation of the dose rate at different locations at JSA and outside its building. Dose rate was determined through modeling and simulation of JSA using the Monte Carlo Code MCNP-5 and experimentally through using dosimeters. Following a very conservative approach, the calculated annual doses are well below the limits adopted by Jordan's Energy and Mineral Regulatory Commission (EMRC), International Atomic Energy Agency (IAEA) and the United States Nuclear Regulatory Commission (NRC).