Notice of a **FREE PUBLIC LECTURE** presented

in conjunction with the **Women-In-Physics Group by the**

Australian Institute of Physics (SA branch)

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The Claire Corani Memorial Lecture

at 7:30pm on Thursday 5th June 2008 in the Napier 102, Napier Building, University of Adelaide

"Medical Physics: Exposure to radiation is not all bad news!"

by Associate Professor Eva Bezak

Department of Medical Physics, Royal Adelaide Hospital
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Abstract:

Medical physics is a diverse scientific field where the knowledge gained in many areas of physics is applied to healing people. As a result of recent rapid translation of new physical techniques into medical instrumentation, physicists are becoming essential in many clinical areas, e.g. in diagnostics, treatment, prevention of human disease and disability, and development of new technologies.

Many medical physicists based in hospitals work in the area of Radiation Oncology, i.e. in the field of medicine that applies various types of radiation to treatment and management of cancer. Medical physicists, as specialists with knowledge of the physical, mathematical and biological mechanisms of various radiation therapy processes, are vital in implementation of radiation physics into the clinical treatment of cancer. They also contribute greatly to the design and development of modern medical linear accelerators and to modern treatment modalities.

The Department of Medical Physics, Royal Adelaide Hospital has been involved in the development of a so called *transmitted in-vivo dosimetry* technique using 2-dimensional flat panel detectors made of liquid ionization chamber arrays.

For this presentation the *transmitted in-vivo dosimetry* technique will be described in more detail, along with its application, and some background on the working life of a medical physicist.

Biography:

Eva Bezak obtained MSc in Medical Physics, University of Adelaide and PhD in Nuclear Physics, ANU. Currently, she is the head of Department of Medical Physics at the Royal Adelaide Hospital where she provides services to Radiation Oncology. She also lectures at the University of Adelaide and University of South Australia and supervises postgraduate MSc and PhD students in medical physics. She is the vice-president of the Australasian College of Physical Scientists and Engineers in Medicine and a member of the South Australian Radiation Protection Committee.

The Claire Corani awards, for high achievement by female 2nd-year Physics students, will be presented at the meeting.