

## Lecture on : Particle Detectors as Monitors for Cancer Therapy By Prof. Riccardo Faccini, Roma1, La Sapienza

### Abstract :

Particle detectors are also used to monitor medical treatments of cancer. In particular the diffusion of hadron therapy strongly depends on the possibility to monitor the dose delivered during the treatment, while radio-guided surgery makes use of particle probes to detect possible residual tumors during surgery.

This talk will give an overview of these applications and concentrate on the requirements in terms of data processing and analysis from the physics and medical environments: on one side the presence of high background from nuclear interactions in hadrontherapy and the low energy of the signals in radio-guided surgery ask for dedicated approaches; on the other side the medical environment sets requirements on security, ergonomy and sterilization that are specific of this field.