

第4回 重粒子線医理工セミナー

The 4th Medical Science and Engineering Seminar in Heavy Ion Radiotherapy



4:30 pm



6:30 pm



10:30 am

- ・日時 2024年12月17日 (火) 16:30~17:30
 - ・場所 現地およびオンラインによるハイブリッド形式
現地：群馬大学重粒子線医学センター カンファレンス室
- URL: <https://gunma-u-ac-jp.zoom.us/j/84989947361?pwd=hbKRV2l57Wx5o4hNzBN9FbxRlxpVlr.1>
Zoom Meeting ID: 849 8994 7361
Passcode: 137007



- ・参加費 無料
- ・講師 Anatoly Rozenfeld 先生
(Centre for Medical Radiation Physics, School of Physics, University of Wollongong Australia)

Title: Semiconductor sensors for advanced radiation monitoring in X-ray and particle radiotherapy and space.

Abstract:

More than 50% of cancer patients are treated successfully with radiation therapy. The quality of life of cancer patient is determined by accuracy of dose delivered to the tumour and sparing of a normal tissue that require sophisticated radiation sensors for dose verification of medical radiation.

The talk will concentrate on the state-of-the-art semiconductor radiation sensors developed at Centre for Medical Radiation Physics for high spatial resolution radiation dosimetry and microdosimetry where deposition of ionising energy by charged particles should be measured on a micron scale similar to size of nucleus in a cell. Developed sensors led to paradigm shift in quality assurance of delivered radiation treatment in contemporary X-ray, proton and heavy ion therapy.

Due to commonality of radiation fields in particle therapy and space radiation environment, application of developed sensors in radiation fields mimicking solar particle events (SPE) and Galactic Cosmic Rays (GCR) for evaluation of spacecraft radiation shielding and prediction of radiation damage of space electronics will be presented.

Development of advanced radiation sensors for medical and space applications benefited from many years of the silicon radiation detector technology development utilised for studies in fundamental high energy physics.

Dist. Prof. Rozenfeld is globally renowned, he is the director and founder of CMRP. He has published an enormous number of papers and established a strong research program on Proton and Heavy Ion Therapy in Australia.

お問い合わせ先:

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