Contribution ID: **74** Type: **Oral Presentation**

# Indoor Radon levels and the associated effective dose rate in selected buildings at the Namibia University of Science and Technology (NUST), Namibia.

Abstract
Studies on radon and its progeny provides strong and compelling evidence that it is the greatest contributor of inhalation dose in the living environment. Indoor radon and the annual effective doses measurements were performed in office buildings at the National University of Science and Technology (NUST), Namibia, using CR-39 nuclear track detectors exposed for 3 months in the offices. The office buildings were classified according to age, occupancy, number of floors and size of the rooms. Based on the dosimetric approach and epidemiological determination conversions for radon exposures the annual effective doses were calculated and compared. The radon concentration in the selected office buildings varied from 32.0 Bq/m3 to 90.5 Bq/m3 in new and buildings old buildings respectively, with an average value of 58.6 Bq/m3. The annual effective dose due to exposure to indoor radon and its progeny was also found to vary from 0.4 to 1.70 mSv/yr. The radon concentration in all the office buildings were significantly lower than 600 Bq/m3 receipted by International Commission on Radiological Protection (ICRP) as the action level for a closed space.

Keywords
Indoor radon, annual effective dose, exposure, nuclear track detectors, Namibia University of Science and Technology

**Author:** Mr ZIVUKU, Munyaradzi (Namibia University of Science and Technology)

**Co-authors:** Ms KEENDJELE , Justina (Namibia University of Science and Technology); Mr ONJEFU, Sylvanus (Namibia University of Science and Technology)

**Presenter:** Mr ZIVUKU, Munyaradzi (Namibia University of Science and Technology)

**Session Classification:** Accelerator, Medical and Radiation Physics

**Track Classification:** Accelerator, Medical and Radiation Physics