**2nd INTERNATIONAL TURKIC WORLD CONGRESS on SCIENCE and ENGINEERING**

**Title of the Paper:** Radiation detectors for industrial and medical applications

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**Absract:** Experimental nuclear physics is driven by advances in detector technology. A diversity of detectors are needed which are optimised for detecting different types of ionising radiation such as alpha particles, heavy ions, electrons/positrons, gamma rays and neutrons. We will map the basic detector concepts on to the specific detection challenges and compare and contrast the available technology. We will then see how some of this detector technology can be applied to challenges in real-word industrial settings and for medical imaging focussing on recent innovations in areas such as nuclear decommissioning and homeland security.