My Current Research Interests:

1- Study on Inter-Intrafractional motion error compensation at Image Guided Radiotherapy (IGRT)
2- Study on adaptive correlation models for precise tumor motion tracking at external surrogates radiotherapy
3- Study on feature based deformable registration of medical images for respiratory signal extraction at IGRT
4- Dose distribution calculations on dynamic tumors and surrounding nearby tissues using 4D Monte Carlo simulation methods at gated radiotherapy
5- Study on Anthropomorphic XCAT phantom in collaboration with Prof. Paul Segars as phantom developer via my students
6- Monte Carlo simulation studies on physical properties of CdZnTl as compound semiconductor detectors in collaboration with Dept. of Physics, Surrey University, UK
7- A study on infrared optical tracking system for implementing patient setup based on TPS information of each patient