



Applying physics to improve health in low- and middle-income countries

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Abstract: Medical physics applies the principles of physics to medicine, with major contributions in radiotherapy, which treats cancer patients with radiation, and diagnostic imaging, which uses radiation, magnetic fields, or sound waves to visualize disease. These technologies have transformed health care in many high-income countries, but access to modern radiological services remains deeply unequal globally. In many low- and middle-income countries, patients are confronted with outdated equipment, long delays, or no access at all to lifesaving imaging and treatment. This presentation will examine how medical physicists can assist in closing these gaps, drawing on examples from Africa, Asia, and other regions. It will introduce the foundations of radiotherapy and imaging, explain the challenges of delivering these services in resource limited settings, and present some of the innovative strategies that are helping to expand access, including new approaches to education, training, and technology adaptation. The talk will illustrate how physicists can contribute to building more equitable health systems worldwide.

Wednesday, October 29th | 2:00pm-3:15pm | Science Hall 126 & Zoom

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