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The University of Dayton

News Release

March 7, 1991
Contact: Jim Feuer

UD RESEARCHER'S INEXPENSIVE ADVANCEMENT COULD IMPROVE MEDICAL DIAGNOSES

DAYTON, Ohio -- A University of Dayton researcher has developed an inexpensive method of producing "pseudo-colored" X-rays and other diagnostic tools that could help physicians detect medical problems earlier and more accurately.

Mohammad Karim, director of UD's Center for Electro-Optics, isn't the first person to produce such color images. But whereas other researchers use three expensive green, red and blue lasers, Karim is able to produce the images using the simple white light of a slide projector.

The process first involves encoding the X-ray, mammogram, angiogram or other black-and-white image. White light is then shone through a series of lenses and the encoded image before traveling through an aperture similar to that in a camera. A color image results on a surface behind the aperture, and by varying the size and location of the opening, different colors can be produced.

A person can detect about 15-20 shades of gray with the naked eye, says Karim. With pseudo coloring, however, a person may be able to detect as many as 20,000 different image levels and "extract finer details otherwise impossible to detect," he says.

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For media interviews, call **Mohammad Karim** at (513) 229-3611.