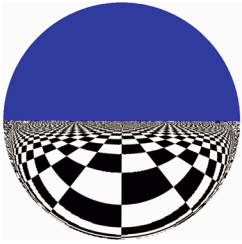
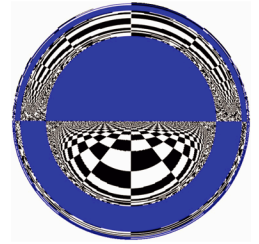


CHELLURI LECTURE

A special Oliver Club offered in memory of Raju Chelluri



Cloaking Devices, Electromagnetic Wormholes, and Transformation Optics



The laws of physics can be formulated in ways that are independent of the choice of coordinate system. (Einstein's special and general theories of relativity are well known examples of this.) Starting a decade ago, this was promoted within the optics community as a way of coming up with theoretical blueprints for novel optical devices which affect light and other kinds of waves in ways not encountered in nature. Now, due to progress in material science, these designs have the potential to be physically realized. It turns out that mathematicians have been considering closely related issues for some time, but from another point of view. I will discuss both approaches and describe two of the most interesting examples of transformation optics to date: cloaking devices, which make objects appear to be empty space, and electromagnetic wormholes, which trick waves into behaving as though the topology of space has been changed.

Allan Greenleaf

University of Rochester

A reception will be held at 3:30 PM in the Mathematics Department faculty lounge (532 Malott Hall).



Thursday, April 24, 2008 at 4:30 PM in 228 Malott Hall (Bache Aud.)

The Chelluri Lecture series is offered in memory of Thyagaraju (Raju) Chelluri, a brilliant student, gifted scholar, and wonderful human being who graduated magna cum laude in mathematics from Cornell in 1999 and was awarded a Ph.D. posthumously from Rutgers University in 2004.