

## "Simulating the Appearance of Natural Materials"

Henrik Wann Jensen  
University of California at San Diego

Why is the sky blue? Why is grass green? What determines the color of human skin? Questions such as these are increasingly important in the development of the next generation algorithms for appearance modeling in computer graphics.

In this talk, I will describe some of our recent work in simulating the appearance of materials such as human skin, hair, milk, and ice. Our algorithms simulate the scattering of light within materials and are capable of efficiently handling both variation due to texture and due to layers within the materials. I will also present new research for predicting the appearance of materials based on their molecular structure in order to answer the question: "what will it look like if I mix these molecules together"?