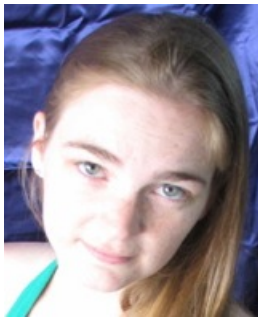# Physics Department Seminar

Friday March 15th, 2013

11:00am in PhSc 105
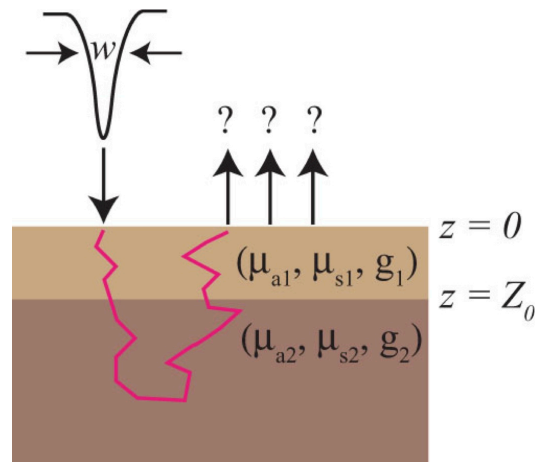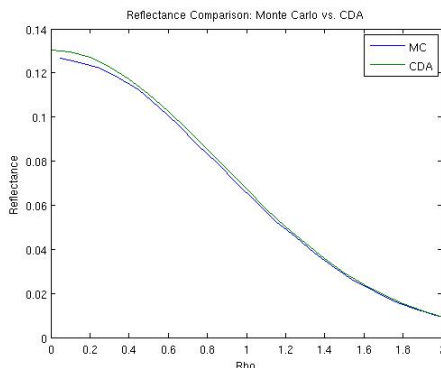
"The Corrected Diffusion Approximation:
How We Stumbled on Something Awesome"

Ms. Shelley Rohde
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University of California, Merced

Abstract:

The Corrected Diffusion Approximation (CDA) was derived to gain an accurate and computationally efficient model for light propagation in superficial tissues. We use this model to compute the diffuse reflectance when given the optical properties of tissue. We previously published the results and confirmation of this model for a uniform half space with a normally incident beam source. We have since extended the model to include layered tissues and oblique sources in order to isolate superficial tissues. Additionally, this model contains a "bonus" that allows us to do more than just look at superficial tissues. I will present the CDA with a thin beam source, as well as the implications of our "bonus".