



## Colloquium

# The Institute Colloquium

**Steve Marschner**

Cornell University

Host:

Many beautiful materials derive their appearance and mechanical properties from a microstructure composed of fibers. This is true of hair, fur, cloth, and even wood. This talk will discuss recent research on modeling, simulation, and rendering that applies to these materials, which shares the theme of modeling and measuring structure to get the right appearance. In hair, the key problem is to model the complex patterns formed by light interacting with individual transparent fibers, which are caused by the small-scale structure of the fibers and their surfaces. Smaller fibers packed together into a solid give rise to the varied appearance of wood, which reflects the three-dimensional anatomy trees, leading to distinctive grain and figure on cut and polished surfaces. The final topic is a new technique for realistically rendering textiles using volume data originating from micro CT scans of small samples of cloth.

**Monday, September 28, 2015 12:45pm - 02:00pm**

Raiffeisen Lecture Hall, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: <https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.