



**Workshop EPFL-Inria
7 et 8 février 2017, Lausanne**

Nicolas Holzschuch

"Beyond the micro-facet model: can we get more realistic materials?"

Realism in photorealistic rendering depend strongly on the quality of the material models we use. The micro-facet reflectance model is the most common model; researchers and artists appreciate its properties: editability, connection to physical properties of the material. Although the model is convenient, it is not well connected to measured reflectance properties. The model is based on several hypothesis (single layer, continuous surface, optical geometry) that are not necessarily present in actual materials. We explore several ways for improving the material models, getting more accurate representations: diffraction effects, multiple layers, multiple scattering, anisotropy, non-central normals.