



**Workshop EPFL-Inria  
January 9 and 10, 2020, Montbonnot**

**Guillaume Loubet**, EPFL

**Title:** « Recent advances in differentiable rendering »

**Abstract:**

Differentiable rendering has recently opened the door to a number of challenging inverse problems involving photorealistic images, such as geometry reconstruction and material estimation from photographs. Differentiable rendering algorithms strive to estimate partial derivatives of pixels in a rendered image with respect to scene parameters, which is difficult because visibility changes are inherently non-differentiable. This talk is about our recent contributions in the field of differentiable rendering and related projects from the Realistic Graphics Lab at EPFL.

**Bio:**

Guillaume Loubet received his M.Sc. degree in Computer Science from ENSIMAG (Grenoble INP) in 2014 and his PhD in Computer Graphics from the Université Grenoble Alpes in 2018, supervised by Fabrice Neyret (Inria Grenoble). He is now a Post Doctoral researcher at the Realistic Graphics Lab at EPFL where he works with Wenzel Jakob (EPFL) and Nicolas Holzschuch (Inria Grenoble). His research interests include physically based rendering, level-of-detail representations, reflectance models and differentiable rendering.