Digital Tools for Sustainability Workshop

ARCH 408/508
Instructor: David Posada
Schedule: Saturday January 9 / Sunday January 10, 9am-2:50pm

Sefaira has made high-performance building design easier by providing each designer with energy analysis tools right from the beginning of a project.

Sefaira has two main functions: First, a palette within the SketchUp and Revit Architecture design interface provides simple, real-time performance analysis of envelope parameters, energy use by building components, energy use intensity (EUI), and daylighting. Second, a cloud-based web application performs more in-depth analysis including comparison of multiple performance-enhancing strategies, and parametric analysis with response curves to estimate the optimal design parameters. With these technological advancements, high-performance building design is now gaining traction.

This workshop will cover preparing SketchUp and Revit files for analysis in Sefaira, setting the climate zone and baseline envelope parameters in the Sefaira Palette for SketchUp, initial analysis of energy performance and daylighting, and testing individual design strategies. Next we'll cover uploading models to the Sefaira web application and the more detailed analysis options provided there, such as bundling of strategies, parametric runs and response curves for individual measures, HVAC assumptions, and performance comparisons.

The day and a half, 10-hour workshop will be offered in Portland with a full day on Saturday, January 9th 2016 and a half day on Sunday Jan 10th. As the Sefaira palette is virtually the same in Revit and SketchUp, we will use sample files and demos in SketchUp, and discuss differences in preparing Revit files. Once models are uploaded to the Sefaira web application the interface is the same.

Students will need to provide and bring their own laptop with either
SketchUp or Revit installed and the Sefaira Plug-in installed. Sefaira licenses are available from the University and are assigned to the student's user name and UO email from the list of registered students. Please contact Shannon Sullivan aaapdx@uoregon.edu or the instructor David Posada posada@pdx.edu if you need assistance obtaining a laptop for the class or installing the software.

System requirements and instructions for installing Sefaira are at: http://learn.sefaira.com/architecture/plugin-installation/