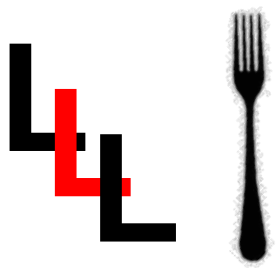




Solar Energy and Building Physics Laboratory

web: <http://leso.epfl.ch>



# LESO LUNCHTIME\* LECTURES

renewable energy - building science - urban physics

Friday 7 November 2014, 12h15-13h15

EPFL – CE 1 103

## VISUAL ASSESSMENT OF BIPV WITH SALIENCY MAP METHOD

Ran Xu

Lucerne University of Applied Sciences and Arts

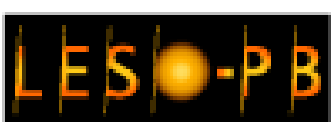
### Summary

Government regulations and building label systems usually have clear numbers and descriptions concerning the building quality they are expecting. However, when it comes to the appearance of a PV installation on an architectural facade, regulations are often made of blurred linguistic descriptions. The problem caused by this phenomenon is that when it comes to a holistic evaluation of a building, with aesthetic aspects involved, fairness is not ensured. Many PV façade installation applications are denied for aesthetic reasons stated semantically and not easily understood.

Therefore a quantified aesthetic assessment for a solar architecture façade is introduced in this presentation. With the help of a saliency map, quantification is possible to evaluate the aesthetic quality of BIPV, so as to enable fairness in deciding whether a PV panel should be installed or not.

### Author

Ran XU has received an architectural education in China (BJTU, 2003-2008, Bsc. ), Germany (TUM, 2008-2011, Dipl.- Ing.) and Singapore (NUS, Jan. – June. 2012, PhD Candidate), during which she realized that the world of pure architectural design and solar energy is still weakly linked. She was enrolled as a PhD student in the EPFL Doctoral Program in Energy and started working as a research assistant at the Architecture Department of Lucerne University of Applied Sciences and Arts in 2012. She is developing an integrated evaluation system for retrofitted solar facades on the basis of real projects. This topic is also the title of her doctoral dissertation, with which she hopes to better combine architectural and solar energy design, and the results will hopefully benefit architecture branches locally and globally.



\*Presentations are followed by drinks & snacks, to give the opportunity to guests and speaker to further discuss the topic.