Visual Computing Forum

Computational Photography

Endre M. Lidal

Visualization Group,
University of Bergen

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Lille Auditorium, floor 2
Høyteknologisenteret (d. blokk)

Abstract:

The number of digital cameras in the world has exploded in the recent years. Today, each of us owns a handful of cameras, not only in the form of compact or SLR cameras, but also in our cellphones, on our laptops, tablets, etc. At the same time the computational powers of all devices has increased tremendously. Surprisingly, the model that even our most modern digital cameras are based on, the camera obscura, has almost been unchanged the last 100 years. The topic of this talk, the research field of computational photography, aims at taking advantage of the recent advantages of computational powers to changing the camera model and even photography as we know it today.

In the talk, I will introduce the many different aspects of computational photography, such as high dynamic range imaging, light field capturing, generalized lenses, and coded photography. The talk will conclude with a discussion on the future of photography, in addition to providing a list of resources for further investigations.

Endre M. Lidal is a PhD-student in the visualization group in department of informatics at university of Bergen, Norway. He submitted his dissertation titled "Sketch-based Storytelling for Cognitive Problem Solving – Externalization, Evaluation, and Communication in Geology" April 12 2013. The defense is scheduled for June 25 2013. This VCF-talk is the trial lecture of Lidal.