



ICVSS 2017

*Sicily ~ 09-15 July*

International Computer Vision Summer School

## **Learning to Act with Natural Supervision**

Vladlen Koltun

Intel Labs, US

### **Abstract**

Intelligence is expressed by adaptive goal-directed behavior. An intelligent system must act to accomplish its goals, and its goals change with the growth of its intelligence. I will discuss the construction and training of intelligent systems, focusing on natural supervision provided by embodied experience: observing the consequences of actions through time and across multiple modalities. The talk will highlight problems with the common distinction between supervised, unsupervised, and reinforcement learning, and will discuss reinforcement learning and associated issues in some detail. I will present recent results and functioning systems that illustrate these ideas.