Coded Computational Imaging

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Welcome

Course WebPage :

http://www.umiacs.umd.edu/~aagrawal/CVPR10Tutorial/index.html

Goals

- Focus on understanding concepts in computational imaging
  - Thinking beyond pixels in ray-space
    - 4D Lightfield, Plenoptic Sampling
  - New ways of sampling the visual world
    - Multiplexing
  - Modifying the capture process to simplify the problem
    - Motion blur, Defocus blur
  - Using reconstruction algorithms and priors
    - Compressive Sensing
- What we will not cover
  - Traditional image processing, photo manipulations & editing

Speaker: Srinivasa Narasimhan

Srinivasa Narasimhan is an Associate Professor at Robotics Institute, CMU.

http://www.cs.cmu.edu/~srinivas/

Speaker: Amit Agrawal

Amit Agrawal is a Research Scientist at MERL.

http://www.umiacs.umd.edu/~aagrawal/

Speaker: Ashok Veeraraghavan

Ashok Veeraraghavan is a Research Scientist at MERL.

http://www.cfar.umd.edu/~vashok/

Speaker: Ankit Mohan

Ankit Mohan is a Post-Doc researcher at MIT Media Lab.

http://web.media.mit.edu/~ankit/

Schedule

Introduction	Srinivasa, 10 mins
Assorted Pixels	Srinivasa, 20 mins
Coding and Modulation in Cameras	Amit, 45 mins
Break	10 min
Light Fields and Applications	Ankit, 60 mins
Break	10 min
Computational Illumination	Srinivasa, 45 mins
Future Trends	Amit, 15 mins
Discussion	