The 4th UG2+ Workshop and Prize Challenge: Bridging the Gap b/w Computational Photography and Visual Recognition

CVPR 2021

http://www.ug2challenge.org/

What is the current state-of-the-art for image restoration for images captured in non-ideal visual environments? We are organizing the **4th UG2+ workshop and challenge in CVPR 2021**. UG2+ 2021 consists of keynote talks, contributed paper presentation & poster session, a special session on privacy and ethics of visual recognition, a challenge competition, and a panel discussion with the invited speakers.

Prize Challenges

Track 1: Object Detection in Poor Visibility Environments

Register: https://forms.gle/Yf853QgPL5xCUy5k6

A dependable vision system must reckon with the entire spectrum of complex unconstrained and dynamic degraded outdoor environments. It is highly desirable to study to what extent, and in what sense, such challenging visual conditions can be coped with, for the goal of achieving robust visual sensing.

1) Object Detection in the Hazy & Rainy Condition
2) Face Detection in the Low-Light Condition

Track 2: Action Recognition from Dark Videos

Register: https://forms.gle/QeisGRN1qhTMHxAd6

Videos shot under adverse illumination are unavoidable, such as night surveillance, and self-driving at night. It is therefore highly desirable to explore robust methods to cope with dark scenarios. It would be even better if such methods could utilize web videos, which are widely available and normally shot under poor illumination.

1) Fully Supervised Action Recognition in the Dark
2) Semi-supervised Action Recognition in the Dark

Call for Papers

Original high-quality contributions are solicited on the following topics:

- Novel algorithms for robust object detection, segmentation or recognition on outdoor mobility platforms, such as UAVs, gliders, autonomous cars, outdoor robots, etc.
- Novel algorithms for robust object detection and/or recognition in the presence of one or more real-world adverse conditions, such as haze, rain, snow, hail, dust, underwater, low-illumination, low resolution, etc.
- The potential models and theories for explaining, quantifying, and optimizing the mutual influence between the low-level computational photography (image reconstruction, restoration, or enhancement) tasks and various high-level computer vision tasks.
- Novel physically grounded and/or explanatory models, for the underlying degradation and recovery processes, of real-world images going through complicated adverse visual conditions.
- Novel evaluation methods and metrics for image restoration and enhancement algorithms, with a particular emphasis on no-reference metrics, since for most real outdoor images with adverse visual conditions it is hard to obtain any clean "ground truth" to compare with.

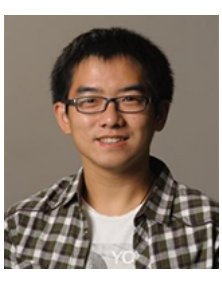
Important Dates

Paper submission Deadline	April 5, 2021 (11:59PM PST)
Paper Acceptance Announcement	April 12, 2021 (11:59PM PST)
Challenge result submission Deadline	May 1, 2021 (11:59PM PST)
Challenge Winner Announcement	May 20, 2021 (11:59PM PST)
CVPR Workshop	June 19, 2021 (Full day)

Organizing Committee



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Invited Speakers



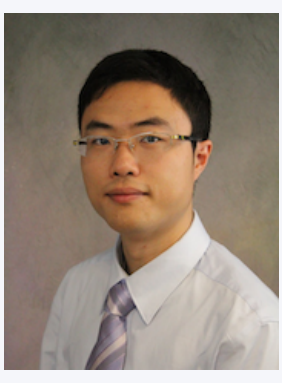
Raquel Urtasun
University of Toronto, Uber ATG



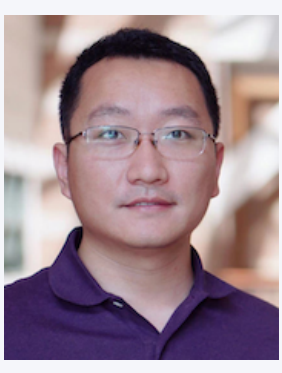
Peyman Milanfar
Google Research



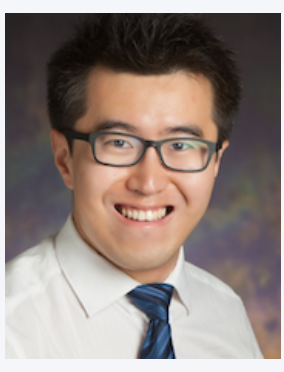
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Workshop Website:

http://www.ug2challenge.org/