



AI CONFERENCE TECHNOLOGY

CVPR 2019 Attracts 9K Attendees; Best Papers Announced; ImageNet Honoured 10 Years Later



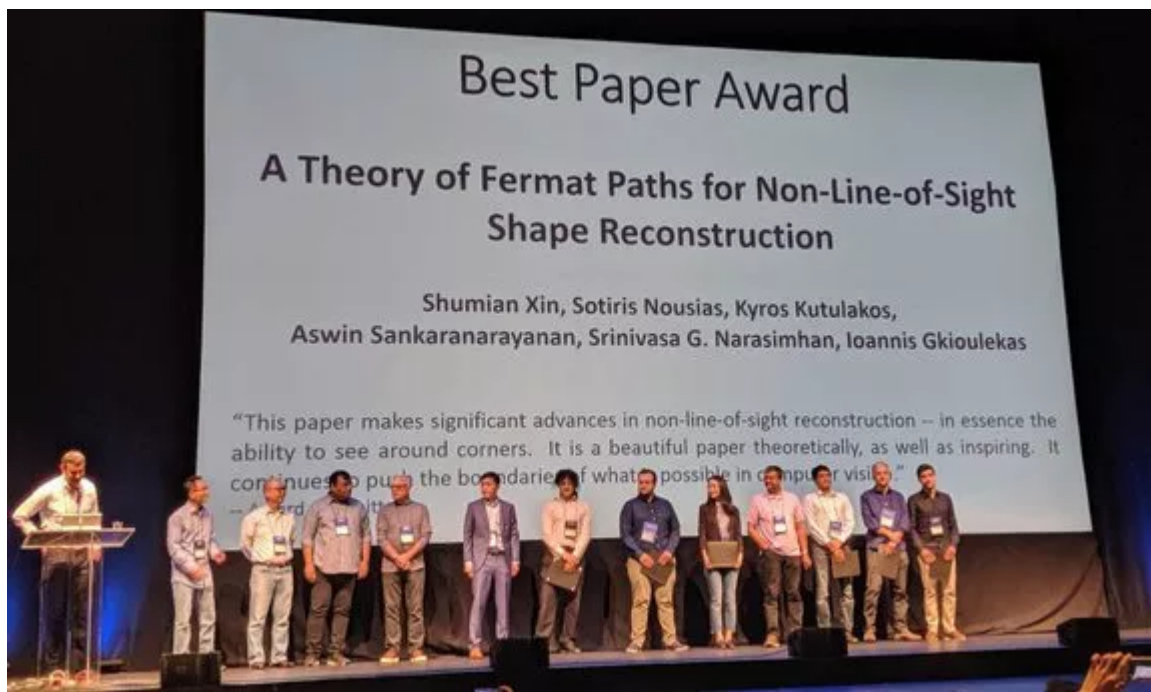
BY SYNCED

2019-06-18

COMMENT 1

The 2019 IEEE Conference on Computer Vision and Pattern Recognition (CVPR) kicked off today in Long Beach, California. CVPR is one of the world's top three academic conferences in the field of computer vision (along with ICCV and ECCV). A total of 1300 papers were accepted this year from a record-high 5165 submissions (25.2 percent acceptance rate).

Conference organizers have announced the recipient of **the CVPR 2019 Best Paper Award**: [***A Theory of Fermat Paths for Non-Line-of-Sight Shape Reconstruction***](#) from Carnegie Mellon University, University of Toronto, and University College London. The paper presents a novel theory on Fermat paths of light between a known visible scene and an unknown object not in the line of sight of a transient camera. These light paths either obey specular reflection or are reflected by the object's boundary, and hence encode the shape of the hidden object.



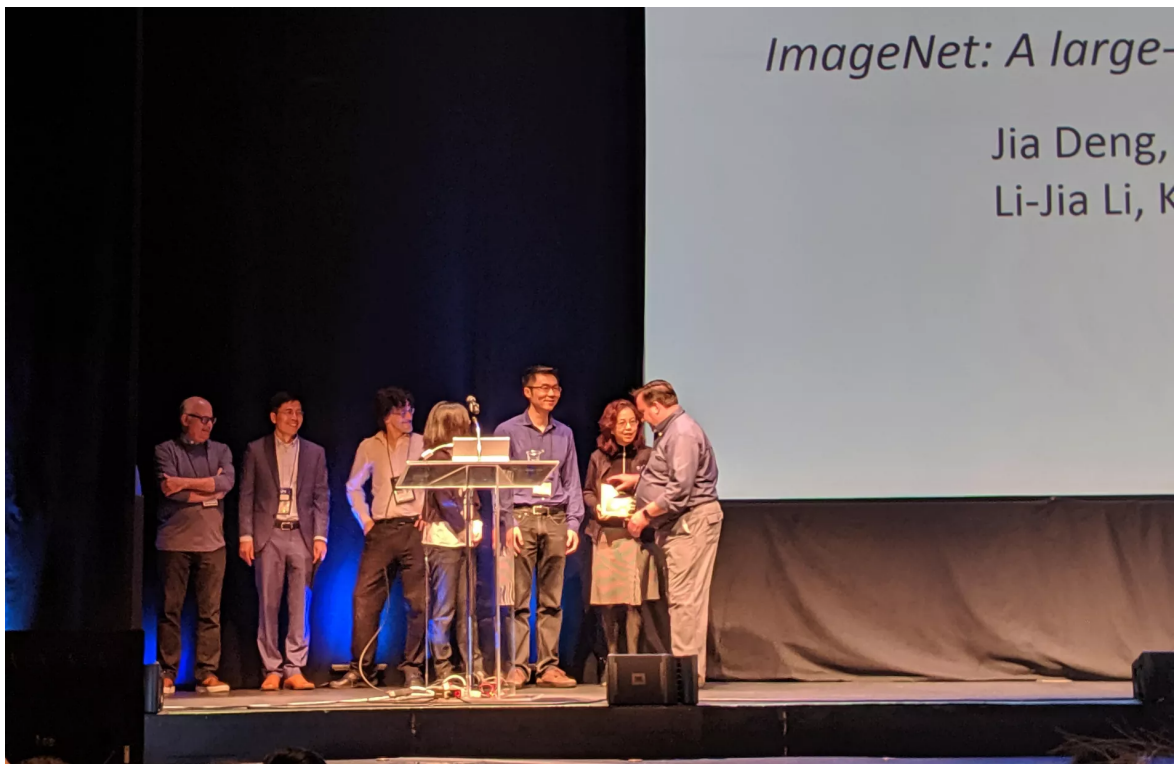
The **Best Student Paper** award goes to [*Reinforced Cross-Modal Matching & Self-Supervised Imitation Learning for Vision-Language Navigation*](#) from University of California at Santa Barbara, Microsoft Research in Redmond, and Duke University. The paper proposes a new method for vision-language navigation (VLN) tasks that combines the strengths of both reinforcement learning and self-supervised imitation learning. The method enables a robot (embodied agent) to navigate to a target position within a 3D environment by following natural language instructions that reference environmental landmarks, akin to how humans give and follow directions. Paper author William Wang, who is the NLP group director at the University of California at Santa Barbara, tweeted that the paper received all three “Strong Accepts” in peer review to rank No.1.



Also announced were **CVPR Honorable Mentions** for the papers [*A Style-Based Generator Architecture for Generative Adversarial Networks*](#) and [*Learning the Depths of Moving People by Watching Frozen People*](#).

A memorable moment at CVPR this morning was the announcement of the **PAMI Longuet-Higgins Prize**, a retrospective award which recognizes a CVPR paper for enduring relevancy and tremendous contributions over a 10-year period. The PAMI Technical Committee awarded the prize to the seminal [*ImageNet: A Large-Scale Hierarchical Image Database*](#). The 2009 release of the large-scale visual database with over 14 million images and more than 20,000 categories spawned the computer vision boom and enabled the leveraging of massive data to unleash the power of deep learning.

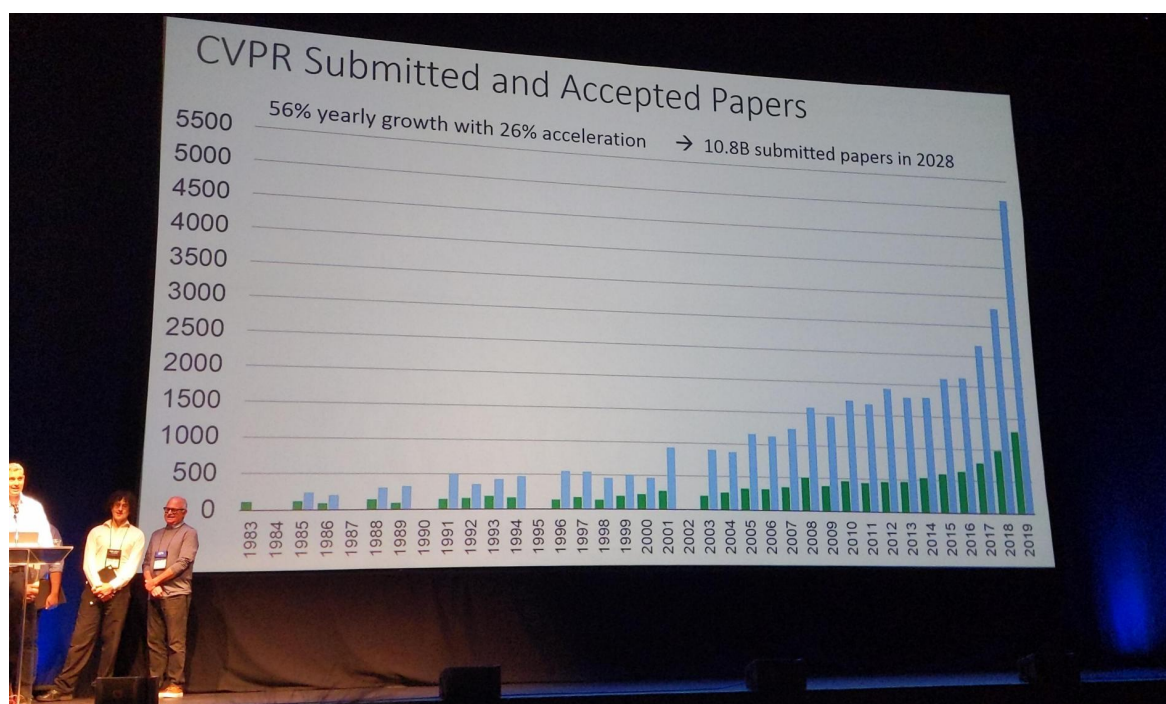
The ImageNet paper's first author Princeton University Assistant Professor Jia Deng told Synced "In 2009, ImageNet was not the most mainstream work, but all of us who did this project believed that it would have a big impact, so we put in a lot of efforts. One of the revelations it gives me is that you don't have to do the most popular things, but do what you believe will have an impact."



Conference co-sponsor the IEEE Computer Society used the occasion to announce the **2019 Computer Pioneer Award** Recipient: Jitendra Malik, the Arthur J. Chick Professor of Electrical Engineering and Computer Sciences at the University of California, Berkeley. Malik was honored for his “leading role in developing computer vision into a thriving discipline through pioneering research, leadership, and mentorships.” He is now also leading Facebook AI Research out of Menlo Park.

Synced has compiled a number of interesting CVPR 2019 facts and figures:

- Over 9,200 registered attendees from 68 countries.
- Paper submissions increased 56 percent over last year with a 26 percent acceleration. (Organizers joked that at this rate submissions could top 10 billion in 2028!)



- 14,104 authors submitted papers: 56 percent from Asia, 27 percent from North America, and 14 percent from Europe.
- Of 2,887 reviewers assigned to evaluate submitted papers, 72 percent are faculty or researchers and 28 percent are students. Conference organizers say all reviewers are experienced and qualified: two accepted CVPR papers are minimum requirements and 50 percent of reviewers have reviewed papers at least three times.
- The CVPR 2019 received a record-high of over US\$3.1 million in sponsorships.
- There are 132 area chairs, including 20 from Asia-based institutions and 22 women.
- What's new in CVPR 2019 is a short oral (five-minute) presentation followed by a three-minute Q&A session. There are 288 shot orals this year with groups of three speakers organized by topic.
- CVPR 2019 teamed up with Georgia Tech to create a new [tool](#) to help attendees find talks and posters of interest.

[CVPR 2019](#) runs through June 20 at the Long Beach Convention Center. Synced will be reporting from the conference throughout the week.

Journalist: Tony Peng | **Editor:** Michael Sarazen

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