

# Omid Poursaeed

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## Education

- 2015–Present **Ph.D.** Electrical and Computer Engineering, Cornell University & Cornell Tech, **GPA: 4.18/4.3**  
**Advisor:** Professor **Serge Belongie**  
**Courses:** Advanced Topics in Machine Learning, Computer Vision, Machine Learning for Data Science, Statistical Inference and Decision, Natural Language Processing, Linear Programming, Real Analysis
- 2010–2015 **B.Sc.** Sharif University of Technology (Graduated with honors)  
MAJOR: Electrical Engineering, MINOR: Mathematics
- 2006–2010 Allameh Helli High School, Affiliated with the *National Organization for Development of Exceptional Talents (NODET)*

## Research Interests

- Computer Vision
- Generative Models
- Adversarial Learning
- 3D Deep Learning

## Publications

- [1] Coupling Explicit & Implicit Surface Representations for Generative 3D Modeling; ECCV 2020  
Omid Poursaeed, Matthew Fisher, Noam Aigerman, Vladimir Kim
- [2] Self-supervised Learning of Point Clouds via Orientation Estimation; Under Review 2020  
Omid Poursaeed, Tianxing Jiang, Quintessa Qiao, Nayun Xu, Vladimir Kim
- [3] Fine-grained Generation of Unrestricted Adversarial Examples; Under Review 2020  
Omid Poursaeed, Tianxing Jiang, Harry Yang, Serge Belongie, Ser-Nam Lim
- [4] Interpolative AutoEncoders for Unsupervised Few-Shot Image Generation; Under Review 2020  
Davis Wertheimer, Omid Poursaeed, Yordanos Goshu, Bharath Hariharan
- [5] Neural Puppet: Generative Layered Cartoon Characters; WACV 2019  
Omid Poursaeed, Vladimir Kim, Eli Shechtman, Jun Saito, Serge Belongie
- [6] Differential Privacy has Disparate Impact on Model Accuracy; NeurIPS 2019  
Eugene Bagdasaryan, Omid Poursaeed, Vitaly Shmatikov
- [7] Generative Adversarial Perturbations; CVPR 2018  
Omid Poursaeed, Isay Katsman, Bicheng Gao and Serge Belongie
- [8] Deep Fundamental Matrix Estimation without Correspondences; ECCV 2018  
Omid Poursaeed, Guandao Yang, Aditya Prakash, Hanqing Jiang, Qiuren Fang, Bharath Hariharan, Serge Belongie
- [9] Stacked Generative Adversarial Networks; CVPR 2017  
Xun Huang, Yixuan Li, Omid Poursaeed, John Hopcroft, Serge Belongie
- [10] Vision-based Real Estate Price Estimation: Machine Vision and Applications 2017  
Omid Poursaeed, Tomas Matera, Serge Belongie
- [11] Analytical studies of fragmented-spectrum multi-level OFDM-CDMA technique in cognitive radio networks; IEEE UEMCON 2016; Farhad Akhouni, Saeed Sharifi, Omid Poursaeed, Jawad Salehi
- [12] Cognitive-engined spectrum-fragmented synchronous MC-CDMA based on generalized hadamard codes; IEEE WCNC 2015; M.H. Shoreh, M.J. Khojasteh, Omid Poursaeed, Jawad Salehi

- [13] Resource allocation using fragmented-spectrum synchronous OFDM-CDMA in cognitive radio networks; IWCIT 2014; Farhad Akhoondi, Omid Poursaeed, Jawad Salehi

## Experience

- Summer 2019 Research Intern at **Adobe Research**
- Research Intern in the Creative Intelligence Lab with *Vladimir Kim* and *Matthew Fisher*
  - Worked on Hybrid Surface Representations for Generative 3D Modeling (ECCV 2020)
- Fall & Winter 2019 Research Intern at **Facebook AI**
- Research Intern in the Computer Vision team with *Ser-Nam Lim*
  - Worked on Fine-grained Generation of Unrestricted Adversarial Examples (under review)
- Summer 2018 Research Intern at **Adobe Research**
- Research Intern in the Creative Intelligence Lab with *Vladimir Kim* and *Eli Shechtman*
  - Worked on Generative Modeling of 2.5D Animation via Template Mesh Deformation (WACV 2019)
- Summer 2017 Research Intern at **eBay Research**
- Research Intern with *Shuai Zheng*, *Hadi Kiapour* and *Robinson Piramuthu*
  - Worked on Generative Modeling of Street-fashion Imagery with Stacked Generative Adversarial Networks (published patent)
- 2016 – 2020 Research Assistant at *SE(3) Computer Vision Group at Cornell Tech* with Professor **Serge Belongie**
- 2013 – 2014 Research Assistant at *Optical Networks Research Lab* with Professor Jawad Salehi

## Honors and Awards

- 2019 Awarded **DLI Doctoral Fellowship** from Cornell Tech
- 2015 Awarded **Jacobs Fellowship** from Cornell University
- 2010 Ranked **12<sup>th</sup>** among more than 277,000 participants in the Nationwide Entrance Exam of Universities
- 2010 Ranked **9<sup>th</sup>** among more than 300,000 participants in the Azad University's Entrance Exam
- 2010-2014 Awarded Fellowship of the *National Foundation of Elites*
- 2003-2010 Member of the National Organization for Development of Exceptional Talents (NODET)

## Professional Service

Reviewer for CVPR, NeurIPS, ICCV, ECCV, ICLR, AAAI, IEEE TPAMI, IEEE Transactions on Multimedia, ACM Transactions on Privacy & Security, IEEE Transactions on Industrial Electronics

Program Committee member for AAAI and CVPR Workshop on Adversarial Machine Learning

## Patents

- [1] Generating a digital image using a generative adversarial network, with Shuai Zheng, Hadi Kiapour and Robinson Piramuthu
- [2] Object animation using Generative Neural Networks (pending), with Vladimir Kim, Jun Saito and Eli Shechtman
- [3] Learning Hybrid Shape Representations (pending), with Vladimir Kim, Matthew Fisher and Noam Aigerman

## Technical Skills

- Programming Python, C/C++, Pytorch, TensorFlow, Torch7, Chainer, BVLC Caffe, Theano (Lasagne, Keras), The scientific Python stack (numpy/scipy, scikit-learn, etc), MATLAB, HTML
- Platforms Linux/UNIX, Amazon Web Services (AWS), Google Cloud Platform, Amazon Mechanical Turk