

# 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, Tehran, Iran (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

- Deep Learning
- Computer Vision
- Machine Learning
- Generative Models

## Publications

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

- [12] Resource allocation using fragmented-spectrum synchronous OFDM-CDMA in cognitive radio networks; IEEE Workshop on Communication and Information Theory (IWCIT 2014)  
Farhad Akhooondi, Omid Poursaeed and Jawad A. Salehi

## Experience

- Summer 2019 Research Intern at **Adobe Research**, Creative Intelligence Lab with *Vladimir Kim* and *Matt Fisher*  
– Hybrid Surface Representations for Generative 3D Modeling
- Fall & Winter 2019 Research Intern at **Facebook AI**, Computer Vision team with *Ser-Nam Lim*  
– Fine-grained Generation of Unrestricted Adversarial Examples
- Summer 2018 Research Intern at **Adobe Research**, Creative Intelligence Lab with *Vladimir Kim* & *Eli Shechtman*  
– Template-based Mesh Deformation for 2.5D Animation
- Summer 2017 Research Intern at **eBay Research** with *Shuai Zheng* and *Hadi Kiapour*  
– Generative Modeling of Street-fashion Imagery with Stacked Generative Adversarial Networks
- 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 (IEEE Fellow)

## 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*
- 2008 Nominated for *Rouzbeh Prize* by the *Physics Society of Iran*
- 2008 Ranked **2<sup>nd</sup>** in the *Helli-Net* Programming Competitions
- 2003-2010 Member of the National Organization for Development of Exceptional Talents (NODET)

## Professional Service

Reviewer for CVPR, NeurIPS, ICCV, ECCV, AAAI, IEEE TPAMI, IEEE Transactions on Multimedia, ACM Transactions on Privacy and 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, Pytorch, TensorFlow, Torch7, Chainer, BVLC Caffe, Theano (Lasagne, Keras), The scientific Python stack (numpy/scipy, scikit-learn, etc), MATLAB, C/C++, HTML
- Platforms Linux/UNIX, Amazon Web Services (AWS), Google Cloud Platform, Amazon Mechanical Turk

## English Language Proficiency

TOEFL iBT: **112/120** - Reading: 30/30, Listening: 28/30, Speaking: 26/30, Writing: 28/30  
GRE: Quantitative Reasoning: **170/170**, Verbal Reasoning: 158/170