# Nikolaos Karianakis


*Contact Information*

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*Date of Birth* July $15^{th}$, 1986

*Nationality & Citizenship* Greek

*US Visa:* F1 (until Dec 2021)

*Education*

**University of California, Los Angeles, USA**

**Ph.D. in Computer Science**, 2011-2017.

- Area: Computer Vision & Machine Learning.
- Focus: Deep Learning. Advisor: Prof. Stefano Soatto.

**Master's in Computer Science**, 2011-2014.

**National Technical University of Athens, Greece**

**Diploma in Electrical & Computer Engineering**, 2005-2011

- Major: Computer Science & Computer Engineering.
- Minors: Electronics, Systems (Signals / Control / Robotics).
- Thesis: Digital Restoration of Prehistoric Theran Wall-paintings. Area: Computer Vision. Advisor: Prof. Petros Maragos.

*Experience*

Research Intern — **Microsoft Research, Redmond**
Computer Vision & Machine Learning — June - September 2016

- Person re-identification based on shape from depth and development of a recurrent model with reinforced temporal attention. Mentor: Zicheng Liu.

R & D Engineering Intern — **Sony, Tokyo**
Intelligent System Technology Department — June - September 2015

- Algorithm development, framework implementation and simulation, plus real-environment testing with iCart mini. Using Q reinforcement learning techniques and deep neural networks for learning autonomous navigation.

Research Intern — **NASA's Jet Propulsion Laboratory, Pasadena**
Computer Vision & Machine Learning — July - September 2014

- I collaborated with Dr. Thomas Fuchs in the Computer Vision group under Space Grant. We invented an algorithm for generic region proposals and object detection, based on convolutional features of modern neural networks.

Graduate Research Assistant — **University of California, Los Angeles**
Computer Vision & Machine Learning — September 2011 - present

- I have been working with Prof. Stefano Soatto on challenging Computer Vision problems. We learn and engineer novel representations and deep architectures to solve problems such as large-scale detection & classification, occlusion detection and wide-baseline correspondence.

Research Intern **Peking University, Beijing**
Institute of Digital Media, Computer Science July - September 2013

- I worked with Prof. Yizhou Wang in the area of representation learning with Computer Vision applications in image segmentation and depth estimation.

Research Assistant **National Technical University of Athens**
Electrical & Computer Engineering November 2010 - September 2011

- I worked with Prof. Petros Maragos in the digital restoration of the prehistoric Theran wall paintings using image segmentation and total variation inpainting methods. We developed a non-local mechanism which combines semantic template matching and seamless image stitching.

*Publications*

An Empirical Evaluation of Current Convolutional Architectures' Ability to Manage Nuisance Location and Scale Variability. N. Karianakis, J. Dong and S. Soatto. *In IEEE Conference on Computer Vision and Pattern Recognition*, June 2016.

Multiview Feature Engineering and Learning.
J. Dong, N. Karianakis, D. Davis, J. Hernandez, J. Balzer and S. Soatto.
*In IEEE Conference on Computer Vision and Pattern Recognition*, June 2015.

Visual Scene Representations: Scaling & Occlusion in Convolutional Architectures.
S. Soatto, J. Dong and N. Karianakis.
*In International Conference on Learning Representations workshop*, May 2015.

Boosting Convolutional Features for Robust Object Proposals.
N. Karianakis, T. J. Fuchs and S. Soatto. *ArXiv*, March 2015.

Learning to Discriminate in the Wild:
Representation-Learning Network for Nuisance-Invariant Image Comparison.
N. Karianakis, Y. Wang and S. Soatto. *Technical Report*, December 2013.

An integrated System for Digital Restoration of Prehistoric Theran Wall Paintings.
N. Karianakis and P. Maragos.
*In IEEE International Conference on Digital Signal Processing*, July 2013.

*Research Interests*

Deep Learning, Computer Vision, Machine Learning, Robotics, Algorithms.

*Technical Skills*

C/C++, Python, Lua, Matlab, ROS, Haskell, ML, Prolog, Assembly x86/AVR, CUDA, LaTeX, Caffe, Torch, MatConvNet, TensorFlow, Theano.

*Teaching Experience*

*Graduate Teaching Fellow* University of California, Los Angeles

Computer Science I (CS31; Fall 2012, Fall 2013, Winter 2014, Fall 2014).
Instructors: David Smallberg, Michael Shindler.

Computer Science II (CS32; Winter 2013, Spring 2013, Winter 2015).
Instructors: David Smallberg, Carey Nachenberg.

Computer Organization (CS33; Spring 2014). Instructor: Glenn Reinman.

Machine Learning Algorithms (CS260; Fall 2015). Instructor: Ameet Talwalkar.
*Nominated by the CS department for the Distinguished Teaching award.*