

# Soravit (Beer) Changpinyo



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## EDUCATION

**University of Southern California** Los Angeles, CA 2012-2018 (expected)  
Ph.D. Candidate in Computer Science  
M.S. in Computer Science  
Advisor: Prof. Fei Sha  
Current GPA: 3.97/4.00

**Brown University** Providence, RI 2008-2012  
B.S. in Computer Science  
*magna cum laude* with Honors  
GPA: 4.00/4.00

## RESEARCH & INDUSTRY EXPERIENCE

**Research Assistant** Fall 2012-present  
*University of Southern California*  
Supervisor: Prof. Fei Sha

- Learning with limited data including zero-shot, transfer, and multi-task learning. Relevant publications: C2, C3, C4, C5
- Non-metric similarity modeling. Relevant publications: C1, P1
- Applications to computer vision and natural language processing

**Software Engineering Intern** Summer 2017  
*Google Research, New York City*  
Host: Richard Zens  
Large-scale temporal and higher-order analysis of the discourse of topics on the Web

**Software Engineering Intern** Summer 2016  
*Google Research, Mountain View*  
Host: Mark Sandler  
Convolutional neural network compression with sparse random connectivity patterns. Relevant publication: P2

**Research Assistant** Fall 2011 & Spring 2012  
*Brown University*  
Supervisor: Prof. Erik Sudderth  
Bayesian nonparametric methods for image attribute and topic modeling. Relevant publication: T1

**Research Intern** Summer 2011  
*Information Trust Institute, University of Illinois at Urbana-Champaign*  
Supervisors: Profs. Marianne Winslett & Arash Termehchy  
Keyword search over semi-structured information sources

**Research Assistant** Summer 2010  
*Brown University*  
Karen T. Romer Undergraduate Research Award  
Supervisors: Profs. Maurice Herlihy & R. Iris Bahar  
Transactional memory on embedded devices

## SELECTED HONORS

**Annenberg Graduate Fellowship**, University of Southern California (2012-2016)  
**Royal Thai Government Scholarship** (2007-2012)

## INVITED TALKS

### “Zero-Shot Learning for Object Recognition in the Wild”

Amazon	Seattle, Washington	Jan 2018
Bloomberg	New York City, New York	Jan 2018

### “Synthesized Classifier for Zero-Shot Learning”

The French Institute for Research in Computer Science and Automation (Inria, Lille)	Lille, France	Oct 2016
The IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	Las Vegas, Nevada	Jun 2016

## TEACHING EXPERIENCE

### Graduate Teaching Assistant

<i>Machine Learning</i> (CSCI567)	Prof. Fei Sha	Fall 2017
<i>Special Topics in Machine Learning: Generative models &amp; Reinforcement learning</i> (CSCI599)	Prof. Fei Sha	Spring 2017

### Undergraduate Teaching Assistant

<i>Introduction to Machine Learning</i> (CSCI1950f)	Prof. Erik Sudderth	Spring 2012
<i>Scientific Computing and Problem Solving</i> (CSCI0040)	Dr. Christopher Crick	Spring 2011
<i>Models of Computation</i> (CSCI0500)	Prof. John Savage	Fall 2010

## PROFESSIONAL SERVICE ACTIVITIES

### Journal Reviewer

Pattern Recognition, 2018  
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2017  
Computer Vision and Image Understanding (CVIU), 2017

### Conference Reviewer

European Conference on Computer Vision (ECCV), 2018  
Computer Vision and Pattern Recognition (CVPR), 2018  
AAAI Conference on Artificial Intelligence (AAAI), 2017  
Neural Information Processing Systems (NIPS), 2016  
European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD), 2014

## PUBLICATIONS

### Peer-reviewed Conference Proceedings

- [C5] **Soravit Changpinyo**, Hexiang Hu, and Fei Sha. Multi-Task Learning for Sequence Tagging: An Empirical Study. In *Proceedings of the International Conference on Computational Linguistics (COLING)*, 2018. To Appear.
- [C4] **Soravit Changpinyo**, Wei-Lun Chao, and Fei Sha. Predicting Visual Exemplars of Unseen Classes for Zero-shot Learning. In *Proceedings of the IEEE International Conference on Computer Vision (ICCV)*, 2017.
- [C3] Wei-Lun Chao\*, **Soravit Changpinyo\***, Boqing Gong, and Fei Sha. An Empirical Study and Analysis of Generalized Zero-Shot Learning for Object Recognition in the Wild. In *Proceedings of the European Conference on Computer Vision (ECCV)*, 2016.  
**Oral spotlight presentation, 4.9% acceptance rate**
- [C2] **Soravit Changpinyo\***, Wei-Lun Chao\*, Boqing Gong, and Fei Sha. Synthesized Classifiers for Zero-Shot Learning. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016.  
**Oral presentation, 3.9% acceptance rate**
- [C1] **Soravit Changpinyo\***, Kuan Liu\*, and Fei Sha. Similarity Component Analysis. In *Advances in Neural Information Processing Systems (NIPS)*, 2013.

### Pre-prints / Technical Reports

- [P2] **Soravit Changpinyo**, Mark Sandler, and Andrey Zhmoginov. The Power of Sparsity in Convolutional Neural Networks. *arXiv*, 2017.
- [P1] **Soravit Changpinyo**, Zhiyun Lu, and Fei Sha. Probabilistic Latent Multi-Sense Skip-Gram. 2016.

### Theses

- [T2] **Soravit Changpinyo**. Modeling, Learning, and Leveraging Similarity. Ph.D. Thesis, University of Southern California, 2018. To Appear.
- [T1] **Soravit Changpinyo**. Learning Image Attributes using the Indian Buffet Process. Sc.B. Honors Thesis, Brown University, 2012.

## TECHNICAL SKILLS

### Programming Languages

■■■■□ Python, C/C++, Matlab, Java  
■■□□□ SQL, HTML/CSS, JavaScript, PHP, R

### Frameworks

■■■■□ PyTorch, TensorFlow, Theano  
■■□□□ Caffe, Torch

## SELECTED EXTRACURRICULAR ACTIVITIES

**Co-organizer of Trojan AI Social** for discussing topics that go beyond day-to-day research in artificial intelligence (2017)

**Tennis** Brown University Intramural Champions (Spring 2010 & Fall 2011)

**Southeast Asian Service Leadership Network (SEALNet)'s Active Learning Outreach Project Thailand** (Summer 2009)