

# Curriculum Vitae

July 31, 2013

## Siddharth Narayanaswamy

School of Electrical and Computer Engineering  
Purdue University  
[siddharth@iffsid.com](mailto:siddharth@iffsid.com)

<http://iffsid.com>

465 Northwestern Avenue  
West Lafayette, IN 47907, USA  
Tel: +1 765-413-3239

## Education

### PhD - Artificial Intelligence

Aug 2008 – expected Jan 2014  
Purdue University, USA

Thesis Title: **Compositionality in Vision and Language**  
Advisor: Jeffrey Mark Siskind

### Bachelor of Engineering - Electronics and Communication

Aug 2004 – Aug 2008  
Anna University, India

## Experience

PhD student, Artificial Intelligence  
Advisor: Jeffrey Mark Siskind

Aug 2008 – expected Jan 2014  
Purdue University, USA

Undergraduate Research Project  
Supervisor: Muniyandi Manivannan

May 2007 – Aug 2008  
IIT-Madras, India

Part-Time Instructor  
The Princeton Review (Manya Education Pvt.Ltd.)

Oct 2007 – Aug 2008  
Chennai, India

Undergraduate Research Intern  
Doors and Gates Pvt.Ltd.

May 2007 – Sep 2007  
Chennai, India

## Refereed Journal Publications

**Seeing Unseeability to See the Unseeable**  
J2 N. Siddharth, A. Barbu, and J. M. Siskind  
*Advances in Cognitive Systems (ACS)*, 2:77–94  
<http://iffsid.com/publications/siddharth2012unseeability.pdf>

Dec 2012

**Simultaneous Object Detection, Tracking, and Event Recognition**  
J1 A. Barbu, N. Siddharth, A. Michaux, and J. M. Siskind  
*Advances in Cognitive Systems (ACS)*, 2:203–20  
<http://iffsid.com/publications/barbu2012objectsTackingEvents.pdf>

Dec 2012

## Refereed Conference Publications

**Seeing What You're Told: Sentence-Guided Activity Recognition in Video**  
C10 N. Siddharth, A. Barbu, and J. M. Siskind  
*Neural Information Processing Systems (NIPS)*

In review

**The Compositional Nature of Verb and Argument Representations in the Human Brain**  
C9 A. Barbu, N. Siddharth, C. Xiong, J. J. Corso, C. D. Fellbaum, C. Hanson, S. J. Hanson, S. Hélie, E. Malaia, B. A. Pearlmutter, J. M. Siskind, T. M. Talavage, and R. B. Wilbur  
*Neural Information Processing Systems (NIPS)*  
<http://arxiv.org/pdf/1306.2293v1>

In review

**Saying What You're Looking For: Linguistics Meets Video Search**  
C8 A. Barbu, N. Siddharth, and J. M. Siskind  
*Neural Information Processing Systems (NIPS)*

In review

- Recognizing Human Activities from Partially Observed Videos** Jun 2013  
 Y. Cao, D. Barrett, A. Barbu, N. Siddharth, H. Yu, A. Michaux, Y. Lin, S. Dickinson, J. M. Siskind, and S. Wang  
 C7 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*  
 pp. 2658–65 [poster 412/1798 (22.9%)]  
<http://iffsid.com/publications/cao2013partiallyObserved.pdf>
- Seeing Unseeability to See the Unseeable** Dec 2012  
 N. Siddharth, A. Barbu, and J. M. Siskind  
 C6 *Advances in Cognitive Systems (ACS)*  
 2:77–94 [oral 14/38 (37%)], conference presentation associated with [J2]  
<http://iffsid.com/publications/siddharth2012unseeability.pdf>
- Simultaneous Object Detection, Tracking, and Event Recognition** Dec 2012  
 A. Barbu, N. Siddharth, A. Michaux, and J. M. Siskind  
 C5 *Advances in Cognitive Systems (ACS)*  
 2:203–20 [oral 14/38 (37%)], conference presentation associated with [J1]  
<http://iffsid.com/publications/barbu2012objectsTackingEvents.pdf>
- Video In Sentences Out** Aug 2012  
 A. Barbu, A. Bridge, Z. Burchill, D. Coroian, S. Dickinson, S. Fidler, A. Michaux, S. Mussman, N. Siddharth, D. Salvi, L. Schmidt, J. Shangguan, J. M. Siskind, J. Waggoner, S. Wang, J. Wei, Y. Yin and Z. Zhang  
 C4 *Proceedings of the Twenty-Eighth Conference on Uncertainty in Artificial Intelligence (UAI)*  
 pp. 102–12 [oral 24/304 (8%)]  
<http://iffsid.com/publications/barbu2012videoSentences.pdf>
- A Visual Language Model for Estimating Object Pose and Structure in a Generative Visual Domain** May 2011  
 N. Siddharth, A. Barbu, and J. M. Siskind  
 C3 *Proceedings of 2011 IEEE International Conference on Robotics and Automation (ICRA)*  
 pp. 4854–60 [oral 982/2004 (49%)]  
<http://iffsid.com/publications/siddharth2011VisualLanguage.pdf>
- Learning Physically-Instantiated Game Play Through Visual Observation** May 2010  
 A. Barbu, N Siddharth, and J. M. Siskind  
 C2 *Proceedings of 2010 IEEE International Conference on Robotics and Automation (ICRA)*  
 pp. 1879–86 [oral 856/2062 (42%)]  
<http://iffsid.com/publications/barbu2010RobotGames.pdf>
- Design of a Do-It-Yourself VR Based Laparoscopic Simulator** Jan 2009  
 C1 N. Siddharth, M. Manivannan, S. Devasahayam, and G. Mathew  
*Medicine Meets Virtual Reality (MMVR17)*

## Patent Applications

- Sentential Video Search** Jun 2013  
 P1 A. Barbu, N. Siddharth, H. Yu, and J. M. Siskind  
*US Provisional Application 61/835,541*

## Technical Reports

- Large-Scale Automatic Labeling of Video Events with Verbs Based on Event-Participant Interaction** Apr 2012  
 T1 A. Barbu, N. Siddharth, H. Yu, and J. M. Siskind  
*CoRR abs/1204.3616*  
<http://arxiv.org/abs/1204.3616>

## Professional Society Membership

Member, IEEE

## Referee Activity

AAAI

NIPS

CVPR

PAMI

ICDL

PRL

## Personal

Native English, Tamil, and Hindi

## References

### Tony Cohn

School of Computing  
University of Leeds  
Leeds LS2 9JT  
England  
+44 0113-343-5482  
[a.g.cohn@leeds.ac.uk](mailto:a.g.cohn@leeds.ac.uk)

### Sven Dickinson

Department of Computer Science  
University of Toronto  
Room 283B, Pratt Building, 6 King's College Road  
Toronto, Ontario, Canada M5S 3G4  
+1 416-978-3853  
[sven@cs.toronto.edu](mailto:sven@cs.toronto.edu)

### Jeffrey Mark Siskind

School of Electrical & Computer Engineering  
Purdue University  
465 Northwestern Avenue  
West Lafayette, IN 47907, USA  
+1 765-496-3197  
[qobi@purdue.edu](mailto:qobi@purdue.edu)

### Larry Davis

Department of Computer Science  
University of Maryland  
Room 3301, A.V. Williams Building  
College Park, MD 20742, USA  
+1 301-405-6718  
[lsd@cs.umd.edu](mailto:lsd@cs.umd.edu)

### Stephen José Hanson

RUBIC, Psychology Department  
Rutgers University  
Room 324, Smith Hall, 101 Warren Street  
Newark, NJ 07102, USA  
+1 973-353-5440  
[jose@psychology.rutgers.edu](mailto:jose@psychology.rutgers.edu)

### Ronnie Wilbur

Audiology & Speech Sciences  
Purdue University  
Heavilon Hall, Room B-11, 500 Oval Drive  
West Lafayette, IN 47907, USA  
+1 765-494-3822  
[wilbur@purdue.edu](mailto:wilbur@purdue.edu)