

## Nikos Karampatziakis

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EDUCATION **Cornell University**, Ithaca, New York  
2006– PhD Department of Computer Science (GPA: 4+)  
Graduate Minor in Statistics  
**National & Kapodistrian University of Athens**, Athens, Greece  
2003–2005 MSc Department of Informatics & Telecommunications,  
Advanced Computer Systems.  
1999–2003 BSc Department of Informatics & Telecommunications.

RESEARCH Theory and applications of machine learning. Online learning — with full  
INTERESTS or bandit feedback. Large scale learning — learning with many examples,  
many features and many computers. Structured input/output learning  
applications.

HONORS AND Best graduate student, 2004, 2005. Honorary awards and scholarship  
AWARDS grants from the Greek National Scholarship Foundation (IKY) and from  
the Department of Informatics and Telecommunications.

Best undergraduate student, 2000, 2002. Scholarship grants from the  
Greek National Scholarship Foundation (IKY).

PUBLICATIONS A. Beygelzimer, M. Dudik, D. Hsu, S. Kale, N. Karampatziakis, J. Langford,  
L. Reyzin and T. Zhang. *Efficient Optimal Learning for Contextual Bandits* In Proceedings of the 27th Conference on Uncertainty in Artificial Intelligence (UAI 2011).

N. Karampatziakis and J. Langford. *Online Importance Weight Aware Updates*. In Proceedings of the 27th Conference on Uncertainty in Artificial Intelligence (UAI 2011).

D. Hsu, N. Karampatziakis, J. Langford and A. Smola. *Parallel Online Learning*. Scaling Up Machine Learning, book chapter, Cambridge University Press (2011).

N. Karampatziakis. *Static Analysis of Binary Executables using Structural SVMs*. In Advances in Neural Information Processing Systems 23, (NIPS 2010)

N. Karampatziakis and D. Kozen. *Learning Prediction Suffix Trees with*

*Winnow*. In proceedings of the 26th International Conference on Machine Learning (ICML 2009).

R. Caruana, N. Karampatziakis and A. Yessenalina. *An Empirical Evaluation of Supervised Learning in High Dimensions*. In proceedings of the 25th International Conference on Machine Learning (ICML 2008).

I.A. Kakadiaris, G. Passalis, G. Toderici, N. Murtuza, Y. Lu, N. Karampatziakis, and T. Theoharis. *Three-Dimensional Face Recognition in the Presence of Facial Expressions: An Annotated Deformable Model Approach*. IEEE Transactions on Pattern Analysis and Machine Intelligence, 29(4): 640-649, 2007

I. A. Kakadiaris, G. Passalis, G. Toderici, Y. Lu, N. Karampatziakis, Najam Murtuza, Theoharis Theoharis. *Expression-Invariant Multispectral Face Recognition: You Can Smile Now!*. Biometric Technology for Human Identification III, Defense and Security Symposium, April 2006.

N. Karampatziakis, G. Paliouras, D. Pierrakos, P. Stamatopoulos. *Navigation Pattern Discovery Using Grammatical Inference*. Proceedings of the 7th International Colloquium on Grammatical Inference ICGI-2004, LNAI 3264, pp. 187-198, Athens, 2004.

REFEREED  
WORKSHOP  
PAPERS

Miroslav Dudik, Daniel Hsu, Satyen Kale, Nikos Karampatziakis, John Langford, Lev Reyzin, and Tong Zhang. *Efficient Optimal Learning for Contextual Bandits*. In the ICML Workshop on Online Trading of Exploration and Exploitation 2, 2011.

Alina Beygelzimer, Satyen Kale, Nikos Karampatziakis, John Langford, and Lev Reyzin. *Aggressive Learning for Contextual Bandits*. In the Snowbird Learning Workshop (Snowbird), 2011.

D. Hsu, N. Karampatziakis, J. Langford. *Parallel Online Learning*. In the NIPS Workshop on Learning on Cores, Clusters, and Clouds, 2010

Rich Caruana, Nikos Karampatziakis, Ainur Yessenalina *Learning in High Dimensions*. In the Snowbird Learning Workshop (Snowbird), 2008.

OTHER TALKS

*Grouping of Application Resources Based on Usage Data*. Invited Talk. ATC-NY, Ithaca, NY, 2009.

*Learning in High Dimensions*. Invited Talk. National Center for Scientific Research “Demokritos”, Athens, Greece 2008.

PATENTS Graph-Based Classification Based on File Relationships. Patent Pending.

PROFESSIONAL REVIEWER: JMLR, NIPS, ICML, TKDD, North East Student Colloquium  
ACTIVITIES on AI (regional event).

Co-organizer: Cornell Machine Learning Discussion Group.

WORK **Yahoo! Research**  
EXPERIENCE *Intern* **July 2010 – September 2010**  
Derived new “importance aware” updates for online gradient descent with importance weight, implemented parallel online learning algorithms, and worked on contextual bandit problems.

**Microsoft Research**  
*Intern* **October 2010 – January 2011**  
Designed and developed on a new system for finding malware files by incorporating file relationships in the learning algorithm.

**Computational Biomedicine Lab, University of Houston.**  
*Research Assistant* **January, 2005 – January, 2006**  
Implemented an 3D alignment algorithm for the UR8D Face Recognition System<sup>1</sup> and its participation in the Face Recognition Vendor Test 2006.

TEACHING *Teaching Assistant* **September – December, 2011**  
EXPERIENCE CS4700 Artificial Intelligence: Taught review sections, designed and graded coursework.

*Teaching Assistant* **January – May, 2010**  
CS5220 Applications of Parallel Computers: Graded coursework, for a course that covers many aspects of high performance computing.

*Teaching Assistant* **January – May, 2008**  
CS482 Introduction to Analysis of Algorithms: Graded coursework, for a course that covers algorithm design techniques.

*Teaching Assistant* **September – December, 2006**  
CS211 Computers and Programming: Taught recitation sections, designed and graded coursework for a course covering data structures and elementary algorithms.

LANGUAGES English, Greek, C, C++, Python, Java, Matlab, C#, Prolog, Haskell, SQL, Bourne Shell, L<sup>A</sup>T<sub>E</sub>X, HTML.

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<sup>1</sup><http://www.cbl.uh.edu/UR8D/>

REFERENCES

**John Langford**

Senior Researcher  
Yahoo! Research, New York  
111 West 40th Street, 17th Floor  
New York, NY 10018  
Email [jl@yahoo-inc.com](mailto:jl@yahoo-inc.com)

**Thorsten Joachims**

Associate Professor  
Department of Computer Science  
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Ithaca, NY 14853  
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**Robert Kleinberg**

Assistant Professor  
Department of Computer Science  
Cornell University  
Ithaca, NY 14853  
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