

# Nikolay Pavlovich Laptev

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## CONTACT INFORMATION

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## EDUCATION



University of California Los Angeles, Los Angeles, CA USA

- Ph.D., Computer Science (expected graduation: June 2012)
- M.S., Computer science (June 2008)
- PhD research areas: Map-Reduce, Clustering, Classification
- MS Thesis Title: Sporadic and Duplicate Cell Removal when Clustering Data Streams
- Advisor: Carlo Zaniolo



University of California Santa Barbara, Santa Barbara, CA USA

- M.A., Economics (Emphasis on business), June 2007
- B.S., Computer Science, June 2006, Regents Scholarship and Dean's List Honors

## PROFESSIONAL EXPERIENCE

**Google**, Irvine, CA, USA

*Summer intern - Software Engineer*

**June 2011 - September 2011**



- Developed a real-time monitoring system for all Google Analytics accounts (Patent Pending).
- Developed a real-time and fault-tolerant anomaly detection system for Google Analytics.
- Developed a large-scale automated load-testing framework.

**Teradata**, Los Angeles, CA, USA

*Summer intern - Advanced Research and Development* **June 2010 - September 2010**



- Developed a compiler that translated a Teradata SQL UDF into a C UDF.
- Developed new techniques of combining results from distributed sources in a UDF.
- The resulting compiler generated UDFs that had very little overhead compared to a manually specified C UDFs.

**Citrix Systems**, Santa Barbara, CA, USA

*Summer intern - Software Engineer*

**2008 and 2009 Summers**



- Significantly improved previous load testing tools written in both Java and C++.
- Worked closely with other groups to finely tune the expected behavior of the product.
- Learned complex infrastructure that the internal load-testing tools relied upon.

**Commerce Planet (now AdMax Media)**, Santa Barbara, CA, USA

*Summer intern - Software Engineer*

**June, 2007 - September, 2007**



- Developed PHP media applications which were used by more than 4 thousand users per hour.
- Improved upon old technologies, which more than doubled user satisfaction with the product.
- Developed an internal ticketing system which increased work-efficiency of all company employees.

**Commission Junction**, Santa Barbara, CA, USA

*Summer intern - Software Engineer*

**2005 and 2006 Summers**



- Worked on writing perl and SQL scripts for CAT tests.
- Improved old tests that were written in Java.
- Resolved bugs related to the ad-tracking system.

**HONORS AND AWARDS**

Dean's Scholarship, Dean's high honors list, Graduate Student Assistantship, NSF ICDE 2010 Conference Stipend

**ACADEMIC EXPERIENCE**

**Graduate Researcher**, University of California Los Angeles, Los Angeles, CA, USA  
*Graduate researcher* **September, 2008 - Current**

- Improving and extending our internal Database Stream Management System by adding new data mining algorithms and pattern matching algorithms.
- Currently researching ways of extending our DSMS with online map-reduce.

**PUBLICATIONS**

Nikolay Laptev and Carlo Zaniolo, Optimization of Massive Pattern Queries by Dynamic Configuration Morphing, ICDE 2012

Hetal Thakkar, Nikolay Laptev, Hamid Mousavi, Barzan Mozafari and Carlo Zaniolo, SMM: a Data Stream Management System for Knowledge Discovery, ICDE 2011

Ali Irturk, Bridget Benson, Nikolay Laptev, Ryan Kastner Architectural Optimization of Decomposition Algorithms for Wireless Communication Systems, WCNC 2009

Ali Irturk, Bridget Benson, Nikolay Laptev, Ryan Kastner, FPGA acceleration of mean variance framework for optimal asset allocation, High Performance Computational Finance, 2008. WHPCF 2008

**TEACHING EXPERIENCE**

University of California, Los Angeles, CA Teaching Assistant for CS143 Database Systems (Fall 2009)

**PROFESSIONAL EXPERIENCE**

Paper Reviewer for VLDB 2010, PKDD 2010, ICDM 2010 and IIIS 2010.

**OTHER**

- Programming Languages: C, C++, Java, Perl, PHP, SQL, TSQL, Shell Scripts, MPI and other parallel environments,  $\LaTeX$
- Applications: A wide variety of experience with various DBMS such as DB2, Oracle, PostgreSQL and others.
- Operating Systems: Knowledge of Unix/Linux, Windows, OS X and their underlying kernel, file systems and memory management
- Hobbies: Basketball, Racquetball, watching technical lectures and participating in TopCoder competitions.

**REFERENCES**

- Mayur Deshpande, Google, Realtime Analytics Lead, nep@google.com
- Pekka Kostamaa, Teradata, Chief of Advanced Development, pekka.kostamaa@teradata.com
- Yun Chao, Citrix, Lead of Performance Team, yun.chao@citrix.com
- Carlo Zaniolo, UCLA, Professor, zaniolo@cs.ucla.edu