

Vasileios Lekakis

Department of Computer Science
University of Maryland
College Park, MD 20742

lex@cs.umd.edu
www.cs.umd.edu/~lex
+1 240 423 2703

Research Interests

I am primarily interested in the areas of distributed systems, consistency protocols, file systems and computer networking.

Education

UNIVERSITY OF MARYLAND, College Park, MD

Ph.D. student in Computer Science (expected graduation: September 2014) Fall 2009 – present
Advised by Pete J. Keleher

UNIVERSITY OF CRETE, Greece

Master of Science in Computer Science September 2007 – June 2009
Advised by Mema Roussopoulos

UNIVERSITY OF CRETE, Greece

Bachelor of Science in Computer Science September 2001 – June 2007

Awards

University of Maryland Computer Science Teaching Excellence Award for Graduate Teaching Assistants, 2013

Student Travel Grant USENIX ATC 2012

Student Travel Grant USENIX FAST 2011

University of Maryland Computer Science Teaching Excellence Award for Graduate Teaching Assistants, 2010

Publications

ARTICLES IN REFEREED CONFERENCES, JOURNALS AND WORKSHOPS

1. **Don't Trust Your Roommate, or, Access Control and Replication Protocols in 'Home' Environments.**

V. Lekakis, Y. Basagalar, P. Keleher.

The 4th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage '12).

2. **Growing Distributed Systems from a Spore.**

Y. Basagalar, V. Lekakis, P. Keleher.

IEEE International Conference on Distributed Systems, (ICDCS) 2012. Acceptance rate: 13%.

3. **Selfish Overlay Network Creation and Maintenance.**

G. Smaragdakis, N. Laoutaris, V. Lekakis, A. Bestavros, J.W. Byers, and M. Roussopoulos.

To appear in IEEE/ACM Transactions on Networking, 2011..

4. **Sall1 regulates embryonic stem cell differentiation in association with Nanog.**

Karantzali E, Lekakis V, Ioannou M, Hadjimichael C, Papamatheakis J, Kretsovali A.

Journal of Biological Chemistry.

5. **Egoist: Overlay Routing using Selfish Neighbor selection.**

G. Smaragdakis, V. Lekakis, N. Laoutaris, A. Bestavros, J. Byers, M. Roussopoulos.

ACM CoNEXT 2008. December 2008 . Acceptance rate: 17.5%.

Research Experience

UNIVERSITY OF MARYLAND

Graduate Research Assistant; **advisor: Pete Keleher**

Sep. 2009 – present

T.Rex: The T.Rex project is based on the premise that data sharing platforms need to be dynamic, expressive, and user-centric. Further, we argue that such platforms need to include access control and the ability to enforce multiple consistency models, even in seemingly benign environments like the home. We are currently building a prototype of T.Rex that will run on Linux boxes, Macs, and iOS devices.

Spore: The Spore system seeks to build reliable and secure data systems on untrusted substrates. We rely only on untrusted put/get functionality for immutable objects. Hence, this underlying substrate could be anything from a P2P system running on end-user home machines to one of the commercial cloud providers.

TBS: Currently, bootstrapping in large distributed systems is performed in an altruistic manner. The TBS project seeks to transform the altruistic nature of bootstrapping into an incentive compatible one.

GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, GA

Visiting Student; **mentor: Constantine Dovrolis**

Nov. 2008 – Dec. 2008

Skype-Study: Collection, monitoring and analysis of Skype traces, as well as, the development of a heuristics framework for extracting and modeling the patterns of communication between Skype users.

INSTITUTE OF COMPUTER SCIENCE, Crete, Greece

Graduate Research Assistant; **advisor: M.Roussopoulos**

Sep. 2007 – Jul. 2009

SNS: The SNS project capitalizes on the substantial performance of best response wirings for a selfishly-built overlay, I implemented, deployed and evaluated a selfish neighbor selection inspired prototype for overlay routing, called Egoist (see also: <http://csr.bu.edu/sns>).

INSTITUTE OF COMPUTER SCIENCE, Crete, Greece

Undergraduate Research Assistant; **advisor: Maria Papadopouli**

Sep. 2005 – Dec. 2006

ODC: The ODC is a MAC protocol for wireless ad-hoc networks which exploits the availability of multiple channels to increase bandwidth utilization, reduce packet delays and increase energy savings. I evaluated the performance of ODC with extensive simulations in NS-2.

Employment History

AMAZON, Seattle USA

SDE Intern

May 2013 – August 2013

Large data processing project for the Restricted Products team of Amazon Retail Systems department.

TELEFONICA RESEARCH LABS, Barcelona, Spain

Research Intern

June 2010 – August 2010

Participated in the development and the evaluation of a system for bulk inter-data transfers over the Internet.

Skills

LANGUAGES: C, Java, Python, Ruby, Javascript, HTML, SQL, Tcl

TOOLS: FUSE, ZeroMQ, Protocol Buffers, SQLite, Twisted, LibGCrypt, LibTomCrypt

TESTBEDS: PlanetLab, EmuLab

CLOUD: HADOOP, EC2 API, HDFS, HIVE, AWS API

OPERATING SYSTEMS: Linux, Mac OS, Windows 95/XP

Teaching Experience

UNIVERSITY OF MARYLAND

Teaching Assistant

CMSC412 Operating Systems	Fall 2009
CMSC417 Computer Networks	Spring 2010
CMSC417 Computer Networks	Fall 2010
CMSC417 Computer Networks	Fall 2012
CMSC417 Computer Networks	Spring 2013
CMSC417 Computer Networks	Fall 2013

UNIVERSITY OF CRETE, GREECE

Teaching Assistant

CS-335 Computer Networks	Spring 2008
CS-439 Mobile Networks and Computing	Fall 2007
CS-118 Discrete Mathematics	Fall 2007
CS-118 Discrete Mathematics	Fall 2006

Relevant Courses

UNIVERSITY OF MARYLAND

CMSC818K Advanced Operating Systems	Fall 2009
CMSC828R Distributed Data Collection	Fall 2009
CMSC711 Computer Networks	Spring 2010
CMSC818B Distributed File Systems	Fall 2010
CMSC737 Fundamentals of Software Testing	Fall 2010
CMSC858E Models & Algorithms for Socio-Technical Networks	Spring 2011
CMSC818G Information-Centric Design of Context-Aware Systems	Spring 2013

UNIVERSITY OF CRETE

CS528 Introduction to BioInformatics	Fall 2007
CS554 Peer-2-Peer Systems	Fall 2007
CS557 Secure Systems	Fall 2008
CS457 Information Systems Security	Fall 2008
CS435 Network Technology and Programming	Spring 2008
CS565 Workflow Management Systems	Spring 2009
CS439 Mobile Networks and Computing	Spring 2009
CS474 Multimedia Technology	Spring 2009