

LEONIDAS LAMPROPOULOS

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EDUCATION AND WORK EXPERIENCE

University of Maryland, College Park and University of Pennsylvania

2018 - now

Joint Postdoc in Computer Science

Victor Basili Postdoctoral Fellow

PLUM lab and PLClub - Programming Languages Groups

Supervised by Michael Hicks and Benjamin C. Pierce

University of Pennsylvania

2012 - 2018

PhD in Computer Science

Title: Random Testing for Language Design

Advisor: Benjamin C. Pierce

Microsoft Research, Cambridge

Summer 2015

Research Internship

Formal Methods for Neural Network Verification

Advisors: Aditya Nori and Dimitros Vytiniotis

National Technical University of Athens

2007 - 2012

Diploma in Electrical Engineering and Computer Science

GPA: 9.5/10

Thesis Advisor: Kostis Sagonas

BOOKS

QuickChick: Property-Based Testing in Coq

2018

Leonidas Lampropoulos and Benjamin C. Pierce.

Software Foundation Series, Volume 4

Luck: A Probabilistic Language for Testing

chapter, to appear

Leonidas Lampropoulos, Diane Gallois-Wong, Cătălin Hrițcu, John Hughes, Benjamin C. Pierce and Li-yao Xia

In book: Foundations of Probabilistic Programming

Editors: Gilles Barthe, Joost-Pieter Katoen, and Alexandra Silva

PUBLICATIONS

Coverage Guided, Property Based Testing

OOPSLA 2019

Leonidas Lampropoulos, Michael Hicks, and Benjamin C. Pierce.

Advancing Safety Incrementally with Checked C

POST 2019

Andrew Ruef, Leonidas Lampropoulos, Ian Sweet, David Tarditi, and Michael Hicks.

Keep your Laziness in Check

ICFP 2018

Kenneth Foner, Hengchu Zhang and Leonidas Lampropoulos.

- Generating Good Generators for Inductive Relations** *POPL 2018*
Leonidas Lampropoulos, Zoe Paraskevopoulou and Benjamin C.
- Ode on a Random Urn (Functional Pearl)** *Haskell 2017*
Leonidas Lampropoulos, Antal Spector-Zabusky and Kenneth Fonner
- A Tale of Two Provers:
Verifying Monoidal String Matching in Liquid Haskell and Coq** *Haskell 2017*
Niiki Vazou, Leonidas Lampropoulos and Jeff Polakow.
- Beginner's Luck: A Language for Property-Based Generators** *POPL 2017*
Leonidas Lampropoulos, Diane Gallois-Wong, Cătălin Hrițcu, John Hughes, Benjamin C. Pierce, and Li-yao Xia.
- Measuring Neural Net Robustness with Constraints** *NIPS 2016*
Osbert Bastani, Yani Ioannou, Leonidas Lampropoulos, Dimitrios Vytiniotis, Aditya Nori and Antonio Criminisi.
- Foundational Property-Based Testing** *ITP 2015*
Zoe Paraskevopoulou, Cătălin Hrițcu, Maxime Dénès, Leonidas Lampropoulos, and Benjamin C. Pierce.
- Testing Noninterference, Quickly.** *JFP 2016, ICFP 2013*
Cătălin Hrițcu, Leonidas Lampropoulos, Antal Spector-Zabusky, Arthur Azevedo De Amorim, Maxime Dénès, John Hughes, Benjamin C. Pierce, and Dimitrios Vytiniotis.
- Automatic WSDL-guided Test Case Generation
for PropEr Testing of Web Services** *WWV 2012*
Leonidas Lampropoulos and Kostis Sagonas.

PATENTS

- Neural Network Image Classifier** *US 2017/0316281*
Antonio Criminisi, Aditya Nori, Dimitrios Vytiniotis, Osbert Bastani, and Leonidas Lampropoulos
Microsoft Technology Licensing, LLC

TEACHING

- | | |
|---|------------|
| Instructor: Program Analysis and Understanding, CMSC 631, UMD | Fall '19 |
| Lecturer: Property-based Random Testing with QuickChick, DeepSpec Summer School | Summer '18 |
| Lecturer: Property-based Random Testing with QuickChick, DeepSpec Summer School | Summer '17 |
| TA: Advanced Programming, CIS 552, UPenn | Spring '14 |
| TA: Programming Languages and Techniques I, UPenn | Fall '13 |
| TA: Programming Techniques, NTUA | Spring '12 |
| TA: Intro to Programming, NTUA | Fall '11 |

INVITED TALKS AND TUTORIALS

- QuickChick : Property-Based Testing in Coq**
POPL TutorialFest, Lisbon, 2019
- StrictCheck : Keep your Laziness in Check**
PL Seminar, NTUA, 2018
- Ode to a Random Urn**
PL Seminar, NTUA, 2017

Random Testing in the Coq Proof Assistant

Keynote, Computational Logic and Applications, Chalmers, 2017

Making our Own Luck

PL Seminar, NTUA, 2016

Making our Own Luck: A Language for Random Generators

PPS Workshop, 2016

Testing Noninterference, Quickly

PL Seminar, NTUA, 2013

SERVICE

ICFP '21: Workshop co-chair

FLOPS '20: PC member

ICFP '20: Workshop co-chair

OOPSLA '19: SRC judge

OOPSLA '19: PLMW, Panel: PhD Life

PLDI '19: AEC member

PLAS '19: PC member

ICFP '18: PLMW, Panel: Research in Functional Programming

Haskell '16: External Reviewer

AWARDS

2018	Victor Basili PostDoctoral Fellowship (UMD)
2014	Teaching Practicum Award (Penn Engineering)
2012	State Scholarship Foundation (IKY) award and scholarship for first place during the 5th year of studies
July 2011	Second Prize, 18th International Mathematical Competition (IMC) for University Students , Blagoevgrad, Bulgaria
2011	IKY first place award and scholarship (4th year)
July 2010	Honorable Mention, 17th IMC, Blagoevgrad, Bulgaria
2010	IKY first place award and scholarship (3rd year)
July 2009	Honorable Mention, 16th IMC, Budapest, Hungary
Mar 2009	2nd Award, South Eastern European Mathematical Olympiad, Cyprus
June 2007	High School Diploma with honors Magna Cum Laude Mathematics Award, Physics Award, Excellance Award (19.6)
Feb 2007	3rd Award, 24th Mathematical Olympiad Archimedes
Feb 2007	1st Award, 67th Panhellenic Math Contest Euclid
2006	American Mathematics Competition, Certificate of Distinction
2005-2006	Excellance Award (18.6)
Feb 2006	1st Award, 66th Panhellenic Math Contest Euclid
2004-2005	Excellance Award (19)
June 2005	Third Prize, 9th Junior Balcan Mathematical Olympiad, Veroia
2004	American Mathematics Competition, Certificate of Distinction
2003-2004	Excellance Award (19 and 2/13)
2002-2003	Excellance Award (19)
2002	American Mathematics Contest (AMC 8), third place
2001-2002	Excellance Award (19 and 8/13)
2001-2002	Certificate of Distinction

PROJECTS

QuickChick

Property-Based Testing Tool for Coq (OCaml)

Luck - Interpreter

Interpreter for Luck (Haskell)

Luck - Metatheory

Metatheory for Luck (Coq)

Checked C

Metatheory for Checked C (Coq)

Neural Network Analysis Framework

Abstract Interpreter for Deep Neural Networks for Generating Adversarial Examples (C#)

LANGUAGES

Greek: Native

English: Excellent (*Certificate of Proficiency in English, Oxford*)

German: Basic (*B2 Mittelstufe Deutsch*)