

## Petar I. Tsankov

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**EDUCATION**

<i>PhD, Information Security</i> ETH Zurich, Switzerland Focus: Automated security analysis	Jan 2012- Dec 2016 GPA 6.0/6.0
<i>Master of Science, Computer Science</i> ETH Zurich, Switzerland Focus: Information security	Sep 2010 - Nov 2011 GPA 5.76/6.0
<i>Bachelor of Science, Highest honor, Computer Science</i> Georgia Institute of Technology, Atlanta, USA Focus: Operating systems and networks	Aug 2007 - Dec 2009 GPA 3.9/4.0
Georgia Perimeter College, Atlanta, USA Major: Computer science	Jan 2006 - May 2007 transferred in Aug 2007
Technical University, Sofia, Bulgaria Faculty of German Engineering (affiliated with the Karlsruhe Institute of Technology) Major: Computer science	Aug 2003 - Jun 2005 transferred in Jan 2006

## **PUBLISHED PAPERS**

Network-Wide Configuration Synthesis  
Ahmed ElHassany, Petar Tsankov, Laurent Vanbever, Martin Vechev  
*CAV 2017*

Test Execution Checkpointing for Web Applications  
Marco Guarnieri, Petar Tsankov, Tristan Buchs, Mohammad Torabi Dashti, David Basin  
*ACM ISSA 2017*

Access Control with Formal Security Guarantees  
Petar Tsankov  
*PhD Thesis, 2016*

Statistical Deobfuscation of Android Applications  
Benjamin Bichsel, Veselin Raychev, Petar Tsankov, Martin Vechev  
*ACM CCS 2016*

Functionality-Aware Security Enforcement  
Petar Tsankov, Marco Pistoia, Omer Tripp, Martin Vechev, Pietro Ferrara  
*ACM ACSAC 2016*

Access Control Synthesis for Physical Spaces  
Petar Tsankov, Mohammad Torabi Dashti, David Basin  
*IEEE CSF 2016*

Fail-Secure Access Control  
Petar Tsankov, Srdjan Marinovic, Mohammad Torabi Dashti, David Basin  
*ACM CCS 2014*

Decentralized Composite Access Control  
Petar Tsankov, Srdjan Marinovic, Mohammad Torabi Dashti, David Basin  
*ETAPS POST 2014*

Semi-valid Input Coverage for Fuzz testing  
Petar Tsankov, Mohammad Torabi Dashti, David Basin  
*ACM ISSTA 2013*

SecFuzz: Fuzz-testing Security Protocols  
Petar Tsankov, Mohammad Torabi Dashti, David Basin  
*IEEE/ACM AST 2012)*

Constructing Mid-points for Two party Asynchronous Protocols  
Petar Tsankov, Mohammad Torabi Dashti, David Basin  
*OPODIS 2011*

Execution Hijacking: Improving Dynamic Analysis by Flying off Course  
Petar Tsankov, Wei Jin, Alessandro Orso, Saurabh Sinha  
*IEEE ICST 2011)*

## TALKS

Artificial Intelligence and Security Workshop, Rennes, France Apr 2017  
*Statistical Deobfuscation for Android Applications*

Android Security Symposium, Vienna, Austria Mar 2017  
*Statistical Deobfuscation for Android Applications*

System Lunch Seminar, Zurich, Switzerland Mar 2017  
*Network Programmability using Synthesis*

ACSAC, Los Angeles, USA Dec 2016  
*FASE: Functionality Aware Security Enforcement*

CCS, Vienna, Austria Sep 2016  
*Statistical Deobfuscation for Android Applications*

CSF, Lisbon, Portugal Jul 2016  
*Access Control Synthesis for Physical Spaces*

CCS, Scottsdale, US Sep 2014  
*Fail Secure Access Control*

IBM Watson Research Center, Ossining, NY, US Jun, 2014  
*Next-generation Access Control*

POST 2014, Grenoble, France Apr, 2014  
*Decentralized Composite Access Control*

ZISC Day, Google, Zurich, Switzerland Sep 17, 2013  
*Next-generation Access Control Systems*

ISSTA 2013, Lugano, Switzerland Jul 16, 2013  
*Semi-valid Input Coverage for Fuzz testing*

AST 2012, Zürich, Switzerland Jun 2, 2012  
*SecFuzz: Fuzz-testing Security Protocols*

OPODIS 2011, Toulouse, France Dec 16, 2011  
*Constructing Mid-points for Two-party Asynchronous Protocols*

ICST 2011, Berlin, Germany Mar 23, 2011  
*Execution Hijacking: Improving Dynamic Analysis by Flying off Course*

## EMPLOYMENT

*Post-Doc*

Jan 2017 - present

Software Reliability Lab  
ETH Zurich, Switzerland

*Student assistant*

Dec 2010 - Jan 2012

Chair of Systems Design

*Researcher*

May 2014 - Aug 2014

IBM T.J. Watson Research

Yorktown, NY, USA

*Doctoral student*

Jan 2012 - Dec 2016

Institute of Information Security

ETH Zurich, Switzerland

*Student assistant*

Dec 2010 - Jan 2012

Chair of Systems Design

ETH Zurich, Switzerland

- Designed a new graphical interface for Cuttlefish, an open-source network workbench application that visualizes networks (<http://cuttlefish.sourceforge.net/>)
- Implemented network layout algorithms for visualizations of network data

*Student assistant*

Jun 2011 - Sep 2011

Institute of Information Security

ETH Zurich, Switzerland

- Worked on the *In depth fuzz testing of security protocol implementations* project (see Research projects)

*Software developer*

Mar 2010 - Sep 2010

Computer Scientists Corporation, Sofia, Bulgaria

## LANGUAGES

English - fluent

German - intermediate (DSH certificate - Jan 2004)

Bulgarian - native

## HONORS / AWARDS

*Outstanding Undergraduate Researcher Award*

- awarded at Georgia Institute of Technology on March 16th 2010

*People's choice award*

- awarded at the Undergraduate Research Symposium at Georgia Tech in 2009

*Best student in Computer Science for 2007*

- awarded at Georgia Perimeter College in 2007

## REFERENCES

*Martin Vechev*

Assistant Professor, leads the Software Reliability Lab

Chair of Programming Methodology, ETH Zurich

E-mail: [martin.vechev@inf.ethz.ch](mailto:martin.vechev@inf.ethz.ch)

*David Basin*

Associate Professor, holds the chair of Information Security

Institute of Information Security, ETH Zurich

E-mail: [basin@inf.ethz.ch](mailto:basin@inf.ethz.ch)

*Alessandro Orso*

Associate Professor

College of Computing, Georgia Institute of Technology

E-mail: [orso@cc.gatech.edu](mailto:orso@cc.gatech.edu)