

# Stelios Tsampas

---

Email: [stelios.tsampas@fau.de](mailto:stelios.tsampas@fau.de)

Web: <https://www.steliostsampas.com/>

DBLP: <https://dblp.uni-trier.de/pid/245/2735-1.html>

ORCID iD: 0000-0001-8981-2328

Tel: +32 468 333 182

Martensstr. 3

Room 11.155

91058, Erlangen

Germany

## CURRENT POSITION

---

**Tenure-track Assistant Professor**

**Feb. 2025 – present**

ACP Section, IMADA at the University of Southern Denmark (SDU)

## PAST POSITIONS

---

**Postdoctoral Researcher**

**Sep. 2021 – Jan. 2025**

Chair of Theoretical Computer Science at **FAU Erlangen-Nürnberg**

- 09.2021 – 12.2023, CoMoC: *Coalgebraic Model Checking*
- from 03.2024, ATLaS: *Abstract Techniques for Programming Languages and Secure Compilation* (personal project)

**Doctoral Researcher**

**Aug. 2016 – July 2021**

DistriNet Research Unit at **KU Leuven**

## EDUCATION

---

**KU Leuven**

**2016 – 2021**

*Ph.D. in Computer Science*

- *Thesis*: Formal Reasoning about Equivalences:  
from Secure Compilation to Categorical Weak Bisimulation
- *Advisor*: Prof. Frank Piessens

**Aristotle University of Thessaloniki**

**2006 – 2014**

*Master in Electrical and Computer Engineering*

- *Thesis*: A Vulnerable System and Wargame
- *Advisor*: Prof. Andreas L. Symeonidis

## RESEARCH INTERESTS

---

Foundations of Programming Languages; Computer Security; Formal Methods; Verified Compilation; Categorical Structures in Computer Science

## GRANTS

---

Deutsche Forschungsgemeinschaft (DFG):

ATLaS: *Abstract Techniques for Programming Languages and Secure Compilation*

PIs: Stelios Tsampas, Sergey Goncharov. €674.636 (€348.725 personal share). 01.2024 – 12.2026.

## ADVISING

---

Pouya Partow, co-advised with Sergey Goncharov, from 03.2024, ATLaS.

## PUBLICATIONS (CONFERENCE)

---

- Abstract Operational Methods for Call-by-Push-Value** POPL 2025  
Sergey Goncharov, Stelios Tsampas, Henning Urbat  
*ACM SIGPLAN Symposium on Principles of Programming Languages*
- Bialgebraic Reasoning on Higher-Order Program Equivalence** LICS 2024  
Sergey Goncharov, Stefan Milius, Stelios Tsampas, Henning Urbat  
*ACM/IEEE Symposium on Logic in Computer Science*
- Logical Predicates in Higher-Order Mathematical Operational Semantics** FoSSaCS 2024  
Sergey Goncharov, Alessio Santamaria, Lutz Schröder, Stelios Tsampas, Henning Urbat  
*Foundations of Software Science and Computation Structures*
- Weak Similarity in Higher-Order Mathematical Operational Semantics** LICS 2023  
Henning Urbat, Stelios Tsampas, Sergey Goncharov, Stefan Milius, Lutz Schröder  
*ACM/IEEE Symposium on Logic in Computer Science*
- Towards a Higher-Order Mathematical Operational Semantics** POPL 2023  
Sergey Goncharov, Stefan Milius, Lutz Schröder, Stelios Tsampas, Henning Urbat  
*ACM SIGPLAN Symposium on Principles of Programming Languages*  
*Invited for submission to J. Funct. Program.*
- Stateful Structural Operational Semantics** FSCD 2022  
Sergey Goncharov, Stefan Milius, Lutz Schröder, Stelios Tsampas, Henning Urbat  
*International Conference on Formal Structures for Computation and Deduction*
- CapablePtrs: Securely Compiling Partial Programs** CSF 2021  
**Using the Pointers-as-Capabilities Principle**  
Akram El-Korashy, Stelios Tsampas, Marco Patrignani, Dominique Devriese, Deepak Garg, Frank Piessens  
*IEEE Computer Security Foundations Symposium*
- Abstract Congruence Criteria for Weak Bisimilarity** MFCS 2021  
Stelios Tsampas, Christian Williams, Andreas Nuyts, Dominique Devriese, Frank Piessens  
*International Symposium on Mathematical Foundations of Computer Science*
- Fully Abstract and Robust Compilation, and How to Reconcile the Two, Abstractly** APLAS 2021  
Carmine Abate, Matteo Busi, Stelios Tsampas  
*Asian Symposium on Programming Languages and Systems*
- A Categorical Approach to Secure Compilation** CMCS 2020  
Stelios Tsampas, Andreas Nuyts, Dominique Devriese, Frank Piessens  
*Coalgebraic Methods in Computer Science*
- Temporal Safety for Stack Allocated Memory on Capability Machines** CSF 2019  
Stelios Tsampas, Dominique Devriese, Frank Piessens  
*IEEE Computer Security Foundations Symposium*

## MANUSCRIPTS UNDER REVIEW (JOURNAL AND CONFERENCE)

---

- Higher-Order Mathematical Operational Semantics**  
Sergey Goncharov, Stefan Milius, Lutz Schröder, Stelios Tsampas, Henning Urbat  
*Journal of Functional Programming*

## OTHER PUBLICATIONS

---

**CRDTs, Coalgebraically (Early Ideas)** CALCO 2023  
Nathan Liittschwager, Stelios Tsampas, Jonathan Castello, Lindsey Kuper  
*Conference on Algebra and Coalgebra in Computer Science*

**Higher-Order Mathematical Operational Semantics (Early Ideas)** CALCO 2023  
Sergey Goncharov, Stefan Milius, Lutz Schröder, Stelios Tsampas, Henning Urbat  
*Conference on Algebra and Coalgebra in Computer Science*

## TALKS

---

**Logical Relations in Higher-Order Mathematical Operational Semantics** CHoCoLa  
*CHoCoLa meeting, Lyon, May 2024 (Invited Talk)*

**Logical Relations in Higher-Order Mathematical Operational Semantics** WG6 Leuven  
*WG6 meeting, Leuven, April 2024*

**A categorical approach to secure compilation** USCD PS  
*UCSD PS Seminar, February 2021 (Invited Talk)*

**A summary on categorical contextual reasoning** ACT 2019  
*Applied Category Theory*

**Towards Automatic Compartmentalization of C on Capability Machines** FCS 2017  
*Workshop on Foundations of Computer Security (FCS)*

## SERVICE

---

### PC Member

- Mathematical Foundations of Programming Semantics (MFPS) 2025
- Principles of Secure Compilation (PriSC) 2023, 2024
- Foundations of Computer Security (FCS) 2022, 2023

### Reviewer

- POPL, FoSSaCS, CSL

## NON-ACADEMIC EMPLOYMENT

---

**IT Security Engineer** (external partner), Anvil Secure Mar. 2021 – present

**IT Security Engineer**, Census S.A. Jun. 2013 – Apr. 2016

## TEACHING

---

### KU Leuven

#### Teaching Assistant

- B-KUL-H01P5A, *Computer Architecture and Software Systems*  
Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020
- B-KUL-H01P1A, *Object-Oriented Programming*  
Spring 2017, Spring 2019, Spring 2021
- B-KUL-G0Q40C, *Software Design*  
Spring 2018