

Via Torino 155
30172, Mestre (VE)
Italy

Teodors Lisovento

PhD Student

teodors.lisovento.com
teodors.lisovento@unive.it
teodors@lisovento.com
Google Scholar
0009-0005-6644-1049
teodorslisovento

Currently...

2024–present **3rd year PhD student in Computer Science**
Ca' Foscari University of Venice | Italy, Venice
Supervisor: Prof. Pietro Ferrara
Keywords: static analysis, abstract interpretation, software architecture recovery, web frameworks, microservices, system modeling

2024–present **Member of the SSV research group**
Software and System Verification group @ Ca' Foscari University of Venice
Activity: Research focused on static analysis and its applications

About me & At present

I am a PhD student in Computer Science, working in **static analysis** with a particular focus on the theory of **abstract interpretation**. My aim is to **recover the architecture** — the bigger picture — of software systems, and of **microservice** systems in particular. Such systems are hard to reason about: each microservice is independent, self-contained, and may be written in its own language with its own set of dependencies. This heterogeneous, scattered setting — where the system is fragmented into many isolated units of code (recovering it is like reassembling a mosaic with missing pieces) — remains a challenge for static analysis tools. My PhD aims to do some footwork in this direction; concretely, I currently focus on the most widespread case: microservices built on **Spring Boot** (a **Java** web framework) that intercommunicate over **HTTP** in the style of a **REST API**.

What interests me at the utmost level is how to get the ability to think and act when the world is abundant with detail, too much detail. Hence the follow-up —

Last updated August 21, 2026

what to reduce and what to abstract away to gain this ability. Real software is much the same: concrete, sprawling, often millions of lines long. How can one navigate it, hold it in one's mind, and still reach holistic conclusions — capturing some of its system-wide properties?

~~~~~ Education, degrees ~~~~~

2021–2023 **Master Degree of Engineering in Information Technologies**
Latvia University of Life Sciences and Technologies | Latvia, Jelgava

Thesis title: *Privacy identification in web browsing using device memory analysis methods*

Supervisor: *Prof. Gatis Vītols*

Degree grade: *9.5/10*

2017–2021 **Professional Bachelor in Information Technology**
Latvia University of Life Sciences and Technologies | Latvia, Jelgava

Thesis title: *OGC standards for serving georeferenced data as an alternative to ArcGIS REST API web services*

Supervisor: *Prof. Laima Bērziņa*

Obtained with: *qualification in Programming Engineering*

Degree grade: *8.89/10*

~~~~~ Research Publications ~~~~~

Conference Papers ~~~~~

- [C3] G. Caiazza, P. Ferrara, T. Lisovenko, M. Biondo, and D. Tosato. **CoreTrust: Ensuring Data Quality at the Edge**. In: *Proceedings of the 20th European Conference on Software Architecture (ECSA)*. To appear. 2026.
- [C2] V. Arceri, L. Negrini, G. Zanatta, F. Bianchi, T. Lisovenko, L. Olivieri, and P. Ferrara. **JLiSA: The Java Frontend of the Library for Static Analysis (Competition Contribution)**. In: *Tools and Algorithms for the Construction and Analysis of Systems*. Springer Nature Switzerland, 2026, pp. 543–550. [\[link\]](#) [\[pdf\]](#).
- [C1] G. Caiazza, T. Lisovenko, P. Ferrara, F. Berti, F. Ferrari, A. Zaupa, and G. Zhang. **From Legacy to Intelligent IIoT Systems: Automation, Scalability and Elasticity**. In: *2025 IEEE 22nd International Conference on Software Architecture (ICSA)*. 2025, pp. 255–266. [\[link\]](#).

Workshop Papers ~~~~~

- [W1] G. Zanatta, P. Ferrara, T. Lisovenko, L. Negrini, G. Caiazza, and R. White. **Sound Static Analysis for Microservices: Utopia? A Preliminary Experience with LiSA**. In: *Proceedings of the 26th ACM International Workshop on Formal Techniques for Java-like Programs*. FTfJP '24. ACM, 2024, pp. 5–10. [\[link\]](#) [\[pdf\]](#).

~~~~~ International Study and Traineeships ~~~~

PhD Internship

09/2025–04/2026

Research internship (6 months)

APR team, LIP6, Sorbonne University | Paris, France

Traineeship title: *Investigation into web frameworks and microservices with application of static code analysis*

Supervisor: Prof. Antoine Miné [✉](#)

Keywords: *static code analysis, formal methods, concrete semantics, systems modeling, http, rest architecture, microservices, web networks, java, spring boot*

Erasmus+

03/2024–06/2024

Traineeship (3 months)

Ca' Foscari University of Venice | Venice, Italy

Traineeship title: *Applying static code analysis to microservices with LiSA*

Supervisor: Prof. Agostino Cortesi [✉](#)

Keywords: *static code analysis, microservices, python, fastapi, visual graphs, tool adaptation / integration*

08/2021–09/2022

Study Mobility (1 year)

University of Bari Aldo Moro | Bari, Italy

Undertaken during Master studies

Focus: Computer Science

07/2021–10/2021

Traineeship (3 months)

University of Bari Aldo Moro | Bari, Italy

Traineeship title: *UI for anomaly detection from geo-distributed sensor data*

Supervisor: Prof. Michelangelo Ceci [✉](#)

Keywords: *frontend development, ui/ux design, web application development, data visualization and transformation, geo-referenced data, react, javascript*

08/2019–02/2020

Study Mobility (6 months)

University of Málaga | Málaga, Spain

Undertaken during Bachelor studies

Focus: Software Engineering

01/2019–07/2019 **Study Mobility (6 months)**
The Malta College for Arts, Science and Technology | Malta, Paola

Undertaken during Bachelor studies

Focus: Software Development

~~~~~ Community Service ~~~~~

PC Member CSV 2026

AEC Member SAS 2025, ECOOP 2025, SLE 2025

Reviewer SOAP 2026

Student Volunteer ICSA 2025

~~~~~ Industry Experience ~~~~~

06/2021–10/2024 **Fullstack Java Spring Boot Developer**
PrecisionLex [🔗](#) | Latvia, Jelgava

Worked as a Fullstack Developer delivering solutions for financial institutions in collaboration with IT consulting partners. Developed web applications, APIs, and integrations with the *Temenos Transact* core banking system.

My contributions:

- Designed and implemented a digital banking web platform from scratch for Nostro account reconciliation using *Spring Boot*.
- Delivered new features while supporting QA and project processes.
- Maintained and modernized existing systems, including migration from *Spring Boot 2* to newer versions.
- Developed and improved frontend components using *Angular*.
- Extended and debugged services using *REST APIs* and *Apache MQ*.
- Mentored junior developers and conducted code reviews to ensure code quality and consistency.
- Designed and built the company's website.

06/2021–02/2022 **Fullstack Developer (3rd level support)**
Team11.it | Latvia, Riga

Worked as a Full-Stack Developer in a FinTech environment, providing 3rd-level support by resolving issues escalated from 1st and 2nd level teams. Developed patches for a financial and crypto transaction platform, addressing bugs and proposing improvements.

My contributions:

- Developed patches for a financial and crypto transaction platform, resolving bugs and suggesting improvements.
- Built front-end features using *Angular* and back-end services with *TS.ED*.
- Contributed to the continuous improvement and reliability of the platform.

08/2020–02/2021 **.NET Backend Developer**

LVM GEO, Latvian State Forests [🔗](#) / Latvia, Riga

As part of my university curriculum for obtaining a professional bachelor's degree, I worked in the Geospatial Information Technologies business unit (*LVM GEO*) at Latvia's State Forests. I was a member of the backend team, using *.NET* to develop the organization's API services.

My contributions:

- Implemented data interchange formats for cartographic feature serialization and deserialization (*GeoJSON*, *GML*), including conversions between *Esri JSON*, *GeoJSON*, and *GML*.
- Developed test cases using *xUnit* and created API integration tests in *Python*.
- Performed debugging, feature development, and contributed to documentation.
- Researched open-source web services (*OGC WMS/WFS*) as alternatives to *ArcGIS REST APIs* (for my bachelor thesis), and implemented conversion of the *Apply Edits* operation to *WFS-T* as part of the company's migration to open-source solutions.

~~~~~ Summer Schools —————

09/2026 **Engineering Agentic AI: From Lab to Land**

SustainAI, University of Southern Denmark / Denmark, Vejle [🔗](#)

Keywords: generative ai, llm, ai agents & multi-agent systems, software architectures, model context protocol, retrieval-augmented generation, agent-to-agent communication, evaluation

09/2026 **2nd Lipari Summer School on Abstract Interpretation 2026**

Italy, Lipari [🔗](#)

Keywords: abstract interpretation, memory analysis, program verification, precision & completeness, abstract interpreters, practical static analysis with *Astrée* & *Goblint*

08/2025 **Summer School Marktoberdorf 2025**

Germany, Marktoberdorf [🔗](#)

Keywords: formal methods, software verification, theorem proving, smt solvers, model checking, cryptographic protocols

~~~~~ Skills & Interests & Hobbies ~~~~~

Languages	Latvian (Native), Russian (Native), English (Fluent), Italian (Basic; holding B2 level attestation)
Programming	Java, Python, C#, HTML/JS/TS
Frameworks & Tools	Spring Boot, .NET, FastAPI, Flask, Angular, React, Astro, Git, Docker, CI/CD, PostgreSQL
Domains	Microservices, Web Development, Web API, HTTP, Geographic Information System (GIS)
Interests	Static Analysis, Abstract Interpretation, Formal Methods, System Modeling, Program Semantics, Web Development, HTTP, Software Architectures
Hobbies	Coming out of my study-abroad and Erasmus experiences, I am left always looking outward — whether for a small outing to a nearby town, a neighboring province, or some street in a city on the far side of the map (I have long been drawn to the notion of <i>Dérive</i> 🔗). In the same spirit, I enjoy learning languages, currently Italian: if three days pass without my opening a coursebook, revisiting some grammar, or doing a listening exercise, they already feel close to wasted. I am also a literature enthusiast — so much so that on my daily runs I have traded music for an extra half-hour or hour of audiobooks. I find a sad version of myself when imagining the world where I haven't encountered reads like “Записки из Мёртвого дома” 🔗 , “Les Misérables” 🔗 , or the “Odyssey” 🔗 .