

# ELISAVET KOZYRI

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Associate Professor  
Department of Computer Science  
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## EMPLOYMENT

- 2021 - Present* Associate Professor, Computer Science, UiT The Arctic University of Norway
- 2019 - 2021* Postdoctoral Fellow, Computer Science, Harvard University  
Supervisor: Stephen Chong
- 2018 - 2019* Postdoctoral Associate, Computer Science, Cornell University  
Supervisor: Fred B. Schneider

## EDUCATION

- 2018* Ph.D., Computer Science, Cornell University  
Title: Enhancing Expressiveness of Information Flow Labels: Reclassification and Permissiveness  
Advisor: Fred B. Schneider  
Thesis Committee: Andrew Myers (CS), Gün Sirer (CS), Richard Shore (Math)
- 2015* M.S., Computer Science, Cornell University  
Title: Reactive Information Flow Specifications  
Advisor: Fred B. Schneider  
Thesis Committee: Andrew Myers (CS), Gün Sirer (CS), Richard Shore (Math)
- 2010* 5-Year Diploma  
Electrical and Computer Engineering, National Technical University of Athens  
GPA : 9.39/10  
Diploma Thesis: Introducing Semantics of High Performance Interconnection Networks in Virtual Machines  
Advisor: Nectarios Koziris

## TEACHING

- Fall 2023* Lecturer and main designer, Advanced Computer Security (INF 3310) at UiT
- Spring 2022-2024* Lecturer, Computer Security (INF 2310) at UiT
- Fall 2022* Lecturer, Computer Communication (INF 2300) at UiT
- Fall 2021, 2022* Guest Lecturer, Distributed Systems Fundamentals (INF 3200) at UiT

*Fall 2019*                    Guest Lecturer, Compilers (CS 153) at Harvard University

*Spring 2019*                Guest Lecturer, System Security (CS 5430) at Cornell University

*Spring 2017, 2013, 2012*    Teaching Assistant, System Security (CS 5430) at Cornell University

*Summer 2016, 2013, 2010*    Instructor, Operating Systems (CS 4410) at Cornell University

*Fall 2011*                    Student Assistant, Formal Methods (CS 5860) at Cornell University

## PUBLICATIONS

The third country problem under the GDPR: enhancing protection of data transfers with technology. *International Data Privacy Law (IDPL)*, July 2023. With Bjørn Aslak Juliussen, Dag Johansen, and Jon Petter Rui.

Better Balance in Informatics: An Honest Discussion with Students. *Lecture Notes in Computer Science*, 2023. With Mariel Evelyn Markussen Ellingsen, Ragnhild Abel Grape, and Letizia Jaccheri.

Expressing Information Flow Properties. *Foundations and Trends® in Privacy and Security*, Jan 2022. With Stephen Chong and Andrew C. Myers.

RIF: Reactive Information Flow Labels. *Journal of Computer Security*, 2020. Preliminary version available as eCommons technical report 1813/65012.2, Feb 2020. With Fred B. Schneider.

Beyond Labels: Permissiveness for Dynamic Information Flow Enforcement. *32nd IEEE Computer Security Foundations Symposium (CSF)*, June 2019. Preliminary version available as eCommons technical report 1813/64488.2, Feb 2019. With Fred B. Schneider, Andrew Bedford, Josée Desharnais, and Nadia Tawbi.

JRIF: Reactive Information Flow Control for Java. *Foundations of Security, Protocols, and Equational Reasoning*, May 2019. Preliminary version available as eCommons technical report 1813/41194, Oct 2015. With Owen Arden, Andrew C. Myers, and Fred B. Schneider.

Enhancing expressiveness of information flow labels: Reclassification and permissiveness. Ph.D. Dissertation, Cornell University, Ithaca, NY, 2018.

A progress-sensitive flow-sensitive inlined information-flow control monitor (extended version). *Computers & Security*, 2017. With Andrew Bedford, Stephen Chong, Josée Desharnais, and Nadia Tawbi.

Block-safe Information Flow Control. eCommons technical report 1813/44564, Aug 2016. With Josée Desharnais, and Nadia Tawbi.

A Smart HPC interconnect for clusters of Virtual Machines. *Proceedings 6th Workshop on Virtualization in High-Performance Cloud computing (VHPC 2011)*, Bordeaux, France, 29 August - 2 September, 2011. With A. Nanos, N. Nikoleris, S. Psomadakis and N. Koziris.

PHD SUPERVISION

Main supervisor of Daniel Pressensé, Computer Science, UiT, 2023-

Co-supervisor of Mohsin Khan, Computer Science, UiT, 2021-

MASTER'S SUPERVISION

Main supervisor of Pragatheeswaran Balasubramanian, Computer Science, UiT, 2024  
Title: Privacy and Security in Federated Learning: Exploring Training Methods for Leakage Attacks

Main supervisor of Marius Ingebrigtsen, Computer Science, UiT, 2024  
Title: Traceability in Machine Learning Systems: Applying XAI for Label Propagation

Main supervisor of Marie Mikalsen, Computer Science, UiT, 2024  
Title: Summarizing Variable Dependency Graphs

Main supervisor of Henrik Monsen, Computer Science, UiT, 2024  
Title: Bootstrapping Data Labeling at IoT devices

Main supervisor of Danielle Vik, Computer Science, UiT, 2024  
Title: Information Retrieval for Building Online Public Fingerprint

Main supervisor of Steinar Brenna, Computer Science, UiT, 2022  
Title: Correctness Criteria for Function-Based Reclassifiers: A Language Based Approach

CAPSTONE PROJECT SUPERVISION

Main supervisor of Marie Mikalsen, Computer Science, UiT, 2023  
Title: Investigating Variable Dependency Graph Summarization

Main supervisor of Danielle Vik, Computer Science, UiT, 2023  
Title: Information Retrieval Techniques for Managing Online Fingerprint

INTERNS SUPERVISION

Main supervisor of research interns Benoît Leconte and Daniel Pressensé, UiT, Spring and Summer 2023  
Title: Capturing Online Public Footprints of Users

Supervisor of visiting Ph.D candidate Anne Bumiller, Computer Science, UiT, May 2023  
Title: Survey On Privacy-Preserving Federated Identity Management

Main supervisor of research intern Marius Ingebrigtsen, Computer Science, UiT, Summer/Winter 2022  
Title: Automatic Information Flow Analysis of Channels and Cascades

PHD EXAMINATION

Member of the grading committee at the Ph.D defense of Abhiroop Sarkar, Chalmers, 2024  
Title: Functional Programming for Embedded Systems

Second opponent for the Ph.D defense of Felix Schuckert, Computer Science, NTNU, 2024

Title: Opportunities of Insecurity Refactoring for Training and Software Development

Examiner for the Ph.D defence of Anne Bumiller, Computer Science, IRISA-INRIA, 2023

Title: Beyond Risk Scores: Context-Aware Adaptive Authentication

Midway evaluator of Ph.D candidate Marc Weitz, Computer Science, UiT, 2023

Title: AI-based lifestyle modelling

Member of the grading committee at the Ph.D defense of Rodothea Myrsini Tsoupidi, KTH, June 2023

Title: Generating optimized and secure binary code

Member of evaluation committee for hiring a Ph.D candidate on "Statistical Machine Learning/Bioinformatics for Antibiotic Resistance", Jan 2023

Midway evaluator of Ph.D candidate Pietro Randine, Computer Science, UiT, 2021

Title: Patient support system before, during and after clinical visit

#### MASTER'S EXAMINATION

Internal examiner of Master student Niklas Strand, Computer Science, UiT, 2023

Title: Aquilier: An Ethereum-Based Smart Contract for Door-Lock Management in Home Assistant

Internal examiner of Master student Georgios Kournoutis, Computer Science, UiT, 2023

Title: Analyzing the Impact of Peak-Shaving on Load Reduction and on Battery Energy Storage System Degradation: A Simulation-Based Study in Husøy

Internal examiner of Master student Erik Godtlielsen, Computer Science, UiT, 2022

Title: Product Tracing in the Norwegian Fishing Industry Supply Chain Utilizing Go-Quorum Blockchain and Smart Contracts

Internal examiner of Master student Yasiru Rathasara Witharanage, Computer Science, UiT, 2022

Title: ZeroComm: Decentralized, Secure and Trustful Group Communication

External examiner of Master students Sunniva Block and Hanne Olssen, NTNU, 2022

Title: Addressing Gender Inequality in Software Development Processes

Internal examiner of Master student Christer H. Opdahl, Computer Science, UiT, 2022

Title: Audio Training for Post Op CI (Cochlear Implant)

#### PROFESSIONAL ACTIVITIES

PC member, IEEE Computer Security Foundations Symposium (CSF), 2021-24

Reviewer, The Journal of Systems & Software, 2023

Pre-reviewer of the book "Gender Diversity, Equity, and Inclusion in Academia: A Conceptual Framework for Sustainable Transformation", UiT, 2023

PC member, International Conference on Formal Methods in Software Engineering (For-

maliSE), 2023

Informatics Europe Deputy Representative of the Computer Science Department at UiT, 2023-present

Sponsorship and Publicity co-Chair, ACM Celebration of Women in Computing, 2023

Organizer of bi-weekly Culture Discussion meetings among employees, Department of Computer Science, UiT, 2023-present

Organizer of paper-reading sessions for the Cyber Security Group, UiT, 2022

Member of committee for improving PhD recruitment at the Faculty of Natural Sciences and Technology, UiT, 2022-2023

Member of search committee for female candidates for professorship in AI and Computer Systems, UiT, March 2023

Member of research proposal evaluation committee of the Hellenic Foundation for Research and Innovation, 2022-2023

EUGAIN MC member, 2022-present

PC member, Workshop on Programming Languages and Analysis for Security (PLAS), 2022

PC member, Workshop on Principles of Secure Compilation (PriSC), 2022

PC member, Workshop on Foundations of Computer Security (FCS), 2020

Subreviewer, Logic in Computer Science (LICS), 2020

## TALKS

TU Delft, “From GDPR to Information Flow Control”, Feb 2024

NTUA in Athens, “From GDPR to Information Flow Semantics”, Dec 2023

IRISA in Rennes, “Enforcing GDPR Using Data Traceability”, Nov 2023

TU Darmstadt, “Expressive Information Flow Policies”, May 2023

NTNU in Gjøvik, “Information Flow Control and the Right to Data Access”, Jan 2023

SINTEF Digital in Oslo, “Information Flow Control and the Right to Data Access”, Jan 2023

Chalmers University, “From GDPR to Information Flow Semantics”, Nov 2022

University of Crete, “Enforcing GDPR using Data Traceability”, Oct 2022

UiT, “The Third Country Problem and Possible Technological Solutions”, Oct 2022

Aarhus University, “Expressive Information Flow Labels for Reclassification and Permissiveness”, Feb 2019

Max Planck Institute, “Expressive Information Flow Labels for Reclassification and Permissiveness”, Feb 2019

#### WORKSHOPS

“The Quest to Constructing Our Public Online Fingerprint”, within the 10th ACM Celebration of Women in Computing womENCourage, Trondheim, Sep 2023

#### AWARDS

French-American Doctoral Exchange Seminar (FADEx) Laureate, 2017

Outstanding Teaching Assistant award, May 2017, Cornell University.

Scholarship for the Summer School on Formal Methods for the Science of Security, July 22-26, 2013, University of Illinois (Urbana-Champaign).

Scholarship for the GREPSEC Workshop, May 18-19, 2013, San Francisco, California.

Student scholarship for 23rd ACM Symposium on Operating Systems Principles (SOSP), October 23-26, 2011, Cascais, Portugal.

McMullen Fellowship for the first year of PhD studies in Computer Science, Cornell University, 2010.

Honor scholarship from the I.K.Y (State Scholarship Foundation of Greece) for being among the top-10 undergraduate students of the Department of Electrical and Computer Engineering, 2007.

Award from the Chr.Papakyriakopoulos endowment for achieving one of the highest average in classes of mathematics during undergraduate studies, 2005-2006.

#### GENDER BALANCE AND OUTREACH

##### *Roles*

PI of the project “BBI 2.0: Better Balance in Informatics - A more inclusive introduction to Computer Science”, 2024-2026

- Funded by the Research Council of Norway (1,000,000 NOK)

Main coordinator and designer of the project “Who gets to study CS? Breaking the stereotypes among high-school students” (HOP), Computer Science, UiT, Fall 2023

- Funded by UiT (65,000 NOK)

Main coordinator of the project “Better Balance in Informatics” (BBI), Computer Science, UiT, Fall 2021-2022

- Description: Increase the percentage of gender minorities at CS, UiT.
- Website: <https://uit.no/project/bbi>
- Funded by the Research Council of Norway

##### *Supervision*

Student assistant Ine Arvola for HOP, UiT, Spring 2024

Student assistant Tea Strandmo for BBI, UiT, Fall 2022

Student assistant Muhammad Nauman Ali for BBI, UiT, Fall 2022

Student assistant Mariel Evelyn Markussen Ellingsen for BBI, UiT, Spring 2022

Student assistant Ragnhild Abel Grape for BBI and HOP, UiT, Spring 2022, Spring 2024

*Events and Talks*

Presentation “Better Balance in Informatics: An honest discussion with the students”, Diversity in AI @ Northern Lights Deep Learning Conference (NLDL), UiT, 9/1/2024

Visit of female CS students at UiT to Microsoft Development Center Norway, 14/11/2023

Workshop on informing students about the PhD program in CS at UiT, 21/10/2022

Presentation “An honest discussion with the students”, BalanseHub, The Research Council of Norway, 01/06/2022

Presentation “An honest discussion with the students”, Department of Computer Science, UiT, 09/06/2022

Presentation “An honest discussion with the students”, Conference on Equal Futures, UiT, 16/06/2022

Discussion sessions to understand the needs and listen to the proposals of students for better gender balance, UiT, 23/03/2022