# Konstantina Bairaktari

**Ph.D. Student - Khoury College of Computer Sciences - Northeastern University**

@ bairaktari.k@northeastern.edu   ⚲ Boston, Massachusetts   % https://konstantinabrk.github.io/

## Formal Education/Degree

### Ph.D. in Computer Science
**Khoury College of Computer Sciences - Northeastern University**

📅 September 2020 – Present        ⚲ Boston, MA

- Research Area: Differential Privacy, Algorithmic Fairness
- Advisors: Huy L. Nguyen and Jonathan Ullman

### Diploma in Electrical and Computer Engineering
**School of Electrical and Computer Engineering - National Technical University of Athens**

📅 September 2014 – October 2019   ⚲ Athens, Greece

- Specialization: Software, Computer Systems, Computer Networks, Math
- GPA: 9.58/10
- Research Lab: CoReLab
- Advisor: Dimitris Fotakis

## Research Experience

### Graduate Research Assistant
**Northeastern University, Computer Science Theory Group**

📅 2020 – Present        ⚲ Boston, MA

Studying theoretical aspects of data privacy and fairness in machine learning. Current research focused on private model personalization and composition of fair machine learning algorithms.

### Undergraduate Research Assistant
**National Technical Univeristy of Athens, CoReLab**

📅 2018 – 2019        ⚲ Athens, Greece

Investigated the convergence (or divergence) of several natural no-regret dynamics to an equilibrium of Coevolutionary Opinion Formation Games under the direction of Prof. Dimitris Fotakis. This project became the topic of my undergraduate degree thesis.

### Research Intern
**NCSR 'Demokritos', Institute of Informatics and Telecommunications**

📅 July – August 2018        ⚲ Athens, Greece

Implemented community detection algorithms for hypergraphs in Python and conducted experiments on real-world social media datasets comparing the efficiency of different methods under the guidance of Dr. Dimitrios Vogiatzis.

## Areas of Interest

- Differential Privacy
- Algorithmic Fairness

## Technical Skills

Programming

- Python, C, C++, Java, MATLAB, Prolog, SML
- HTML, CSS, LaTeX

## Teaching

### TA, Advanced Algorithms
**Northeastern University**

📅 Fall 2022

⚲ Boston, MA

### TA, Algorithms and Complexity
**NTUA**

📅 Fall 2019

⚲ Athens, Greece

### TA, Discrete Mathematics
**NTUA**

📅 Spring 2019

⚲ Athens, Greece

### Lab Instructor, Intro to Computer Programming
**NTUA**

📅 Fall 2018

⚲ Athens, Greece

### Lab Instructor, Intro to Computer Science
**NTUA**

📅 Fall 2017

⚲ Athens, Greece

### Lab Instructor, Programming Techniques
**NTUA**

📅 Spring 2017

⚲ Athens, Greece

# Publications

### Preprints
- Konstantina Bairaktari, Guy Blanc, Jonathan Ullman, and Lydia Zakynthinou (2022). *Multitask Learning via Shared Features: Algorithms and Hardness*.
- Konstantina Bairaktari, Paul Langton, Huy L. Nguyen, Niklas Smedemark-Margulies, and Jonathan Ullman (2022). *Fair and Useful Cohort Selection*.

## Seminar Talks

### Fair and Useful Cohort Selection
**Algorithmic Fairness Lunch, Stanford University**

📅 November 2021    📍 Stanford, CA

### Fair and Useful Cohort Selection
**CS Theory Seminar, Northeastern University**

📅 November 2021    📍 Boston, MA

## Workshops/Summer Schools Attended

### Workshop on Differential Privacy and Stastistical Data Analysis
**Fields Institute, University of Toronto**

📅 July 2022    📍 Toronto, Canada

### Graduate Summer School on Algorithmic Fairness
**IPAM, UCLA**

📅 July 2022    📍 Los Angeles, CA

### Boston Differential Privacy Summer School
**Boston University**

📅 June 2022    📍 Boston, MA

## Service

### Organizer
- Northeastern CS Theory Seminar Fall 2022

### Peer Review
- AISTATS 2022

## Awards and Grants
- Thomaideio Award 2017-2018, NTUA
- Sarafi Award 2017-2018, NTUA
- Eurobank "The Great Moment for Education" 2014 Fellowship

## Languages

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|---|---|
| **Greek** | native speaker |
| **English** | TOEFL: 117/120 |
| **French** | DALF C2 |
| **German** | Fit in Deutsch A2 |