

Alexandre Vigny

Postdoctoral Researcher

In logic, graph theory, distributed computing, & parameterized complexity.



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About me -

I am currently doing a postdoc at the University of Bremen, in the team of Sebastian Siebertz.

At the moment, we are primarily working on tractable algorithms for sparse classes of graphs.

Before that I was a postdoc at the University of Warsaw, working with Mikołaj Bojańczyk and Szymon Toruńczyk.

A couple of years earlier, I was a Ph.D. student in University Paris Diderot, Paris VII under the guidance of Arnaud Durand and Luc Segoufin.

I worked on nowhere dense classes of graphs and the evaluation of first-order queries.

Generally speaking, my research interests lie in the intersection of logic and graph theory, with a new interest for distributed computing.

Spoken Languages

- French (Native Speaker)
- English (Proficient)
- German (Beginner)

Positions

Since Nov. 2019 Postdoc University of Bremen, Germany

With Sebastian Siebertz.

Nov. 2018 - Sep. 2019 Postdoc University of Warsaw, Poland

With Mikołaj Bojańczyk and Szymon Toruńczyk.

Oct. 2015 - Sep. 2018 Ph.D. student Université Paris Diderot, France

Supervised by Arnaud Durand and Luc Segoufin.

May. 2015 - Sep. 2015 Trainee ENS Cachan, France

Supervised by Luc Segoufin.

[Publications]

Full list

- On my web page: $\label{lem:https://alexandre-vigny.github.io}$

• Or dblp: https://dblp.uni-trier.de/pid/197/0077.html

Selected few

2022 Algorithms and data structures for first-order logic with

connectivity under vertex failures. ICALP' 22

& J. ACM

Dagstuhl, Germany

Paris. France

Together with Michał Pilipczuk, Nicole Schirrmacher,

Szymon Toruńczyk, and Sebastian Siebertz.

2020 Elimination Distance to Bounded Degree on Planar Graphs. MFCS' 20

Together with Alexander Lindermayer and Sebastian Siebertz.

2018/2022 Enumeration for FO Queries over Nowhere Dense Graphs. PODS '18

Together with Nicole Schweikardt and Luc Segoufin.

2018 Ouery Enumeration and Nowhere Dense Graphs. PhD Thesis

Supervised by Arnaud Durand and Luc Segoufin.

Notable Events

30/01/2022 Dagstuhl Seminar 22051 Dagstuhl, Germany

"Finite and Algorithmic Model Theory"

01/10/2021 Dagstuhl Seminar 20121 Dagstuhl, Germany

"Sparsity in Algorithms, Combinatorics and Logic"

28/10/2019 Lecturer in the colloquium "Facets of Complexity" Berlin, Germany

19/05/2019 Dagstuhl Seminar 19211

08/03/2018 Event: "Ma thèse en 180 secondes"

"Enumeration in Data Management"

Explain your thesis to a jury of non specialists in less than 3 minutes.

Teaching

2019-2022 Creation of syllabuses (master level) University of Bremen, Germany

Graph theory, set and model theory, parameterized complexity, etc.

Around 300H

2015-2018 Tutorials and labs (undergrad level): Université Paris Diderot, France

Java programming, automata, algorithms, databases, etc.

Around 180H

Miscellaneous

Involvement in the life of the lab

- PhD representative in charge of supply management.
- Co-organizer of a weekly informal seminar for PhD students.
- Organizer of a weekly social event for PhD students.

Hobbies

I swim, sail, climb, play board games and bridge.