

FABIEN DUFOULON

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Research Interests

- **Theoretical Computer Science / Algorithm Design and Analysis**
 - Distributed Computing
 - Coding Theory
- **Programmable Matter and Bio-inspired Systems**

Academic Experience

Technion

Postdoc with Shay Kutten, Yuval Emek and Keren Censor-Hillel. Mainly on:

- Programmable Matter, or more specifically, leader election in the amoebot model
- Distributed Complexity Theory and the hardness of approximation in CONGEST.

Israel
2019 – now

Université Paris-Saclay

Ph.D. in Computer Science

- Thesis: Overcoming Interference in the Beeping Communication Model
- Advisor and co-advisor: Joffroy Beauquier and Janna Burman.

Paris
2016 – 2019

Education

Centrale Supélec, Grande École d'Ingénieurs

Engineering Degree with a Computer Science Major

Paris
2013 – 2016

Lycée Stanislas, Preparatory Classes for Grandes Écoles

Two-year undergraduate intensive course in mathematics and physics

Paris
2011 – 2013

Publications

Efficient Deterministic Leader Election for Programmable Matter

Fabien Dufoulon, Shay Kutten and William K. Moses Jr.

PODC 2021

Can Uncoordinated Beeps tell Stories?

Fabien Dufoulon, Janna Burman and Joffroy Beauquier

PODC 2020

Optimal Multi Broadcast with Beeps using Group Testing

Joffroy Beauquier, Janna Burman, Peter Davies and Fabien Dufoulon

SIROCCO 2019

Beeping a Deterministic Time-Optimal Leader Election

Fabien Dufoulon, Janna Burman and Joffroy Beauquier

DISC 2018

Brief Announcement: Beeping a Time-Optimal Leader Election

Fabien Dufoulon, Janna Burman and Joffroy Beauquier

PODC 2018

Fast Beeping Protocols for Deterministic MIS and $(\Delta + 1)$ -Coloring in Sparse Graphs

Joffroy Beauquier, Janna Burman, Fabien Dufoulon and Shay Kutten

INFOCOM 2018

Load Prediction for Energy-Aware Scheduling for Cloud Computing Platforms

Alexandre Dambreville, Joanna Tomasik, Johanne Cohen, Fabien Dufoulon

ICDCS 2017

Scientific Activities

- **Conference talks:** INFOCOM 2018, PODC 2018, DISC 2018, SIROCCO 2019, PODC 2020, HALG 2020 ("Can Uncoordinated Beeps tell Stories?")
- **Seminars:**
 - Early results from "Can Uncoordinated Beeps tell Stories?" were presented at:
 - * Université Sorbonne's DELYS seminar (March 2019)
 - * Technion's TDC seminar (May 2019)
 - An overview of my thesis' results were presented at:
 - * Université Aix-Marseille's DALGO seminar (September 2019)
 - * Université Paris-Saclay's GALAC seminar (October 2019)
 - * Université de Bordeaux's distributed algorithms seminar (October 2019)
 - The PODC 2020 paper "Can Uncoordinated Beeps tell Stories?" was also presented at:
 - * Université de Bordeaux's distributed algorithms seminar (March 2021)
- **External Reviewer:** PODC '18,'20 and '21, DISC '18 and '20, OPODIS '18, SSS '19, SPAA '20, Distributed Computing, IEEE Wireless Communications

Teaching Experience

- **Teaching Assistant:**
 - **Introduction to Computer Science and Complexity Theory:** 2016-2018
 - **Numerical Computing:** 2016-2018
 - **Object Oriented Programming (Advanced):** 2016-2018

Internships

Technion and Université Paris-Saclay (with Shay Kutten, Janna Burman and Joffroy Beauquier) <i>Verification Protocols in the Beeping model</i>	5 months, 2016
Université Paris-Saclay (with Johanne Cohen and Lin Chen) <i>Game Theory in Communication Networks</i>	2 months, 2015