

# FABIEN DUFOULON

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## Academic Experience

### Technion

Israel

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

2019 – now

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

### Université Paris-Saclay

Paris

*Ph.D. in Computer Science*

2016 – 2019

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

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## Education

### Centrale Supélec, Grande École d'Ingénieurs

Paris

*Engineering Degree with a Computer Science Major*

2013 – 2016

### Lycée Stanislas, Preparatory Classes for Grandes Écoles

Paris

*Two-year undergraduate intensive course in mathematics and physics*

2011 – 2013

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## Research Interests

- **Theoretical Computer Science / Algorithm Design and Analysis**
  - Distributed Computing
  - Coding Theory
- **Programmable Matter and Swarm Robotics**

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## Publications

### Efficient Deterministic Leader Election for Programmable Matter

PODC 2021

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

### Can Uncoordinated Beeps tell Stories?

PODC 2020

*Fabien Dufoulon, Janna Burman and Joffroy Beauquier*

### Optimal Multi Broadcast with Beeps using Group Testing

SIROCCO 2019

*Joffroy Beauquier, Janna Burman, Peter Davies and Fabien Dufoulon*

### Beeping a Deterministic Time-Optimal Leader Election

DISC 2018

*Fabien Dufoulon, Janna Burman and Joffroy Beauquier*

### Brief Announcement: Beeping a Time-Optimal Leader Election

PODC 2018

*Fabien Dufoulon, Janna Burman and Joffroy Beauquier*

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

INFOCOM 2018

*Joffroy Beauquier, Janna Burman, Fabien Dufoulon and Shay Kutten*

### Load Prediction for Energy-Aware Scheduling for Cloud Computing Platforms

ICDCS 2017

*Alexandre Dambreville, Joanna Tomasik, Johanne Cohen, Fabien Dufoulon*

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## Scientific Activities

- **Conference talks:** INFOCOM 2018, PODC 2018, DISC 2018, SIROCCO 2019, PODC 2020, HALG 2020
- **Seminars:**
  - Université Sorbonne's DELYS seminar (March 2019):  
"Solving 2-hop Desynchronization in the Beeping Model"
  - Technion's TDC seminar (May 2019):  
"Solving 2-hop Desynchronization in the Beeping Model"
  - Université Aix-Marseille's DALGO seminar (September 2019):  
"Overcoming Interference in the Beeping Model"
  - Université Paris-Saclay's GALAC seminar (October 2019):  
"Overcoming Interference in the Beeping Model"
  - Université de Bordeaux's distributed algorithms seminar (October 2019):  
"Overcoming Interference in the Beeping Model"
  - Université de Bordeaux's distributed algorithms seminar (March 2021):  
"Can Uncoordinated Beeps tell Stories?"
- **External Reviewer:** PODC '18,'20 and '21, DISC '18 and '20, OPODIS '18, SSS '19, SPAA '20, Distributed Computing, IEEE Wireless Communications

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## Teaching Experience

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