

Allyx Fontaine

Université de Guyane
DFR Sciences et Technologie
Campus de Troubiran BP 20792
97337 Cayenne Cedex

Tél : +594 594 29 99 48
E-mail : allyx.fontaine@gmail.com

Education and work experience

- 2016-now **Associate Professor in Computer Science** (*Université de Guyane, France*)
Research Lab : UMR Espace-Dev
- 2014-2016 **Associate Researcher in Algorithmics** (*Britol University, United Kingdom*)
Lower and Upper Bounds, Pattern matching, Streaming Algorithms
- 2013-2014 **Assistant Teacher** (*ENSEIRB, Bordeaux, France*)
Distributed algorithms, Randomised Algorithms, Analysis, Formal Proofs

Main publications

Allyx Fontaine, Yves Métivier, John Michael Robson, Akka Zemmari.
Optimal Bit Complexity Randomised Distributed MIS and Maximal.
Information and Computation, 2013.

The k -Mismatch Problem Revisited.

Raphaël Clifford, Allyx Fontaine, Ely Porat, Benjamin Sach, Tatiana Starikovskaya.
SODA 2016 - 27th Annual ACM-SIAM Symposium on Discrete Algorithms, États-Unis, Janvier 2016.

Allyx Fontaine, Akka Zemmari.

RDA: A Coq Library to Reason about Randomised Distributed Algorithms in the Message Passing Model.

SACS – Scientific Annals of Computer Sciences, 2017.

A Graph Theory Approach for Regional Controllability of Boolean Cellular Automata.

Sara Dridi, Samira El Yacoubi, Franco Bagnoli, Allyx Fontaine.

International Journal of Parallel, Emergent and Distributed Systems, 2019.

Research interests:

One of my current research topic is the study of systems complex such as environmental phenomenon. I am interested in the model of such phenomenon using mathematical and computer science model: cellular automata, mobile agents, neural networks. To validate the model, measurements are required. I am then also interested in wireless sensor network and teledetection. Observation but also control of such systems are studied as well as algorithms that can be applied to distributed systems. Once the algorithm is designed, I analyse it in term of time and message complexity. In that case, the aim is to improve the algorithms in order to obtain an optimal algorithm.