Xavier Goaoc
Curriculum vitae, May 2021.

Present position

I am a professor at Université de Lorraine, affiliated with École des Mines de Nancy (CS department) and the LORIA laboratory (joint between Université de Lorraine, CNRS and INRIA).

Training and professional experience

I graduated from ENS Cachan (1997–2001, my major was mathematics, agrégé in 2000) and received my PhD in computer science from Université Nancy 2 (2004) and my habilitation à diriger les recherches from Université Nancy 1 (2011). Prior to my current position, I was a post-doctoral researcher in the algorithm group of the Technische Universität of Eindhoven (2004–05), an INRIA researcher in Nancy (2005–13) and a professor at the computer science department of Université Paris-Est Marne-la-Vallée, now Université Gustave Eiffel (2013–2018).

Research activity

I work in discrete mathematics and algorithms, in discrete and computational geometry. I am interested in connections to line geometry (geometric transversals and modeling of imaging systems), to probabilistic geometry (complexity analysis of geometric algorithms and structure, in particular smoothed complexity), to algebraic topology (nerves, embeddings, generalization of combinatorial convexity), and to extremal combinatorics (VC dimension, excluded patterns, limits of dense structure for geometric hypergraphs).

Here are some selected publications:


A complete list of publications can be found at https://members.loria.fr/XGoaoc/publications.html

Distinctions

Teaching

I mostly teach courses in theoretical computer science (algorithms, complexity, discrete mathematics, cryptography, distributed computing) as well as computer architecture and programming (C, Python, assembly x86).

Supervision

I co-advised the PhD thesis of Julien Demouth (2005–08, now senior engineer at NVIDIA), Guillaume Batog (2008–11, now professor in classes préparatoires) and Galatée Hémery (2018–2020, interrupted to take a professor position in highschool). I hosted, as postdoctoral fellows, Eduardo Ferraz (2013, now a professor of economy at Universidad del Rosario, Bogotá) and Alfredo Hubard (2013-2014, now a professor of computer science at UPEM).

Service


• Co-founder of the Discrete and computational geometry seminar hosted at IHP since 2014 and co-organizer of conferences\(^1\) or schools.\(^2\)

Grants

PI of the ANR collaborative project PRESAGE (2011–15) and of international bilateral PHC grants (with Martin Tancer, Charles University, and with Otfried Cheong, KAIST). Member of the ANR collaborative projects ASPAG (on probabilistic analysis of geometric algorithms) and MINMAX (on min-max principle and waist inequalities).

Selected recent lectures

• Invited lecturer (2h-3h) to École jeunes chercheurs en informatique mathématique 2020, to École de mathématiques expérimentales 2018, to the 2nd Elbe Sandstones Geometry Workshop 2014, and the Leçon de mathématiques d’aujourd’hui 2014.

• Invited speaker (45-60 min.) to the Journées Combinatoire de Bordeaux 2017, Journées structures discrètes 2015, and Journées ALEA 2013.

\(^1\)http://igm.univ-mlv.fr/AlgoB/algorperm2012/ and https://rpm2019.sciencesconf.org/