Yann Strozecki

CV

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🖥 https://yann-strozecki.github.io/
38 years old, 2 children

Academic Appointments

2012–
Maître de conférences (Associate professor), *Versailles University (UVSQ)*.
Member of the ALMOST team, DAVID laboratory

2017–2018
Délégation CNRS (Visiting professor), *Sorbonne University*.
Member of the RO team, LIP6

2011–2012
ATER (Assistant professor), *Paris-Sud University* .
Member of the ALGO team, LRI

2011
Postdoctoral student, *University of Toronto*.
Member of the Theory Group

2010–2011
Part-time ATER (Assistant professor), *Paris Diderot University*.
Member of the Équipe Logique Mathématique, IMJ

Responsabilities

2021–
Board member of HYPHES, *University of Versailles and DCbrain*, HYPHES is a joint laboratory between DAVID an academic laboratory and DCbrain an innovative start-up.

2020–
Head of the ALMOST team, *Versailles University (UVSQ)*, DAVID Laboratory, Responsible of ALMOST, **Al**gorithmique et **Mo**dèle **St**ochastique, one of the four teams of DAVID laboratory. The team currently has 11 permanent members (assistant professors and full professors), 3 associate members and 12 PhD students.

2015–
Board member of DAVID Laboratory, *Versailles University (UVSQ)*.

2013–2015
Elected to the laboratory council of the PRISM, *Versailles University (UVSQ)*.

2008–2010
Representative of the PhD students in the Équipe de Logique Mathématique, *University Paris-Diderot*.

Education

2007–2010
PhD Thesis (supervisor: Arnaud Durand), *Paris Diderot University*, Équipe Logique Mathématique, IMJ.
Title: *Complexity of enumeration and matroid decomposition*
Examiners: Bruno Courcelle, Daniel Král', Michel De Rougemont
Jury: Arnaud Durand, Miki Hermann, Guillaume Malod, Gilles Villard

2006–2007
Master in mathematics, *University Paris Diderot*.
Master of Logic for Mathematics and Foundation of Computer Science.
Internship with Arnaud Durand on holographic algorithms.

2003–2006 **Élève normalien**, *ENS Lyon*.
Bachelor of mathematics, Master 1 in computer science, Agrégation in mathematics specialisation in computer science

Research activities

I am interested in *complexity* and *algorithmic*, specifically of enumeration problems, that is the generation of all solutions of a problem. I am also interested in algorithmic game theory, graph algorithms (with applications to networks, cheminformatic . . .), graph decomposition and logic.

Scientific Animation:
- Talks (about 100) in seminars, workshops and conferences
- Creation and organisation (2013–2021) of the seminar of MAGMAT team and then ALMOST team
- Creation and organisation of the PhD students days of DAVID laboratory
- Organisation of several seminars on the interaction of social sciences and computer science for the federation "Sciences Informatiques, Humaines et Sociales (SIHS)" of the CNRS
- Creation and organisation of the seminar of the PhD students of the logic team, University Paris-Diderot
- Organisation of volontary research internships for bachelor students at University of Versailles, to develop their taste for research
- Contact for DAVID of the GDR Informatique Mathématique and GDR Théorie des Jeux (research groups of the CNRS)

Rewiews and Jurys:
- Program commitee of STACS 2022 and WEPA 2019
- Rewiewer for the journals: Annals of pure and applied logic, Journal Issue of CSL, DAM, IJFCS, IPL, International journal of quantum chemistry, JAIR, LMCS, Journal Issue of MFCS, TCS, TOCS, Journal issue of WEPA
- Rewiewer for the conferences: CN, CSL, ESA, ICALP, IPEC, ISAAC, ISSAC, FOCS, FOSSACS, FSTTCS, LATA, LICS, MFCS, SAT, SODA, STACS, WG
- Member of the hiring committe for an associate professor at DAVID laboratory (2020)
- Member of the supervision committee of the PhD of Mattia Gastaldello (Lyon 1 et Rome) and Yishu Wang (Lyon 1)
- Member of the jury of the PhD of Nicolas de Rugy (Paris 7, 2015) and Yishu Wang (Lyon 1, 2021)

PhD Supervision
- Xavier Badin de Montjoye (2019-2022).
  Title: New strategy iteration methods for simple stochastic games.
  Supervisors: David Auger, Jean Michel Fourneau, Yann Strozecki. PhD co-advised at 50%.
  One article has been published in a conference.
- Maël Guiraud (2018-2021), PhD defended in June 2021.
  Title: Deterministic scheduling of periodic datagrams for low latency in 5G and beyond
  Academic Supervisors: Dominique Barth, Yann Strozecki.
  Industrial Supervisors: Brice Leclerc, Olivier Marcé.
  CIFRE PhD, industrial collaboration with Nokia Bell-Labs. PhD co-advised at 80% for the academic side. Two articles haves been published in conferences, two articles have been submitted and two patents have been filed. The subject of the thesis has been presented in the radio show

"La recherche montre en main" on France Culture. Maël Guiraud has been hired as associate professor at CESI (engineering school).

Student Supervision:
- Vincent Reinhard (2012-2013, Labex CHARMMMAT), post-doctoral student on the enumeration of planar maps for cheminformatics
- Maël Guiraud supervised as a research engineer on three projects on time parallel simulation of Markov processes (2016, ANR MARMOT), latency in optic networks (2017-2018, ANR NGREEN), and optimisation of a logistic chain (2021, ANR HYPHES).
- Priscille Daoulas (2021), master internship on algorithms for building molecular cages with a given shape
- Xavier Badin de Montjoye (2018), master internship on strategy iteration algorithms for simple stochastic games
- Maël Guiraud (2016), master internship on the minimisation of latency for periodic communications in networks.
- Pierre Macherel (2015), master internship on simple stochastic games
- Maxime Trekka (DIGICOSME, 2017), master 1 internship on reconstruction of individual routes in a road network from flows
- Yannis Juglaret (2014), engineering shool internship, on simple stochastic games
- Ruben Staub (2016), bachelor internship (ENS Lyon), on efficient algorithms for planar map isomorphism
- Karim Ghallab (2016), IUT internship, development of a simulator of an optic ring network to evaluate latency
- Supervised many master 1 projects for a course on topics like clustering for genomics, enumeration, scheduling, data compression, combinatorics . . .

International:
- Invited at the Dagsthul seminars "Counting Complexity 2", "Algorithmic Enumeration: Output-sensitive, Input-Sensitive, Parameterized, Approximative" (keynote speaker) and "Enumeration in Data Management" (tutorial speaker)
- Invited one month at IMSC Chennai to work with Meena Mahajan
- Invited 1 month at the Fields Institute of Toronto (program on contraint satisfaction problems and universal algebra)
- Invited 6 months in the Theory Group of Toronto University to work with Pascal Koiran
- Two months of master 1 internship with Peter Bürgisser, Paderborn University, on Algebraic complexity and fast matrix multiplication.

Scientific Projects and Grants:
- ANR project laboratoire commun Hyphes (2021-2025), industrial collaboration between DAVID and the start-up DCbrain on algorithmic and game theory to solve coupled networks problems (telecommunication, energy, transportation . . .). Member of the board of the common laboratory. Writing of the scientific project. Organisation of the interactions between DCbrain and DAVID.
- Member of ANR project AGGREG (2014-2019) on aggregating query answers, responsible for the theme complexity and lower bounds. Participation to all the project meetings and workshops as speaker. Mid-project presentation in front of the ANR committee.
- Member of ANR projects COMPA (2014-2019) on algebraic complexity, ENUM on enumeration, and VERAP on approximate verification. Several papers produced for these projects, participation to some their meetings and reading groups.

- Member of a PRMO project on stochastic optimisation (2017-2018)
- Member of a CEFIPRA project(2012-2015) for collaboration of indian and french researchers on algebraic complexity (writing parts of the scientific program).

Teaching Experience

I have taught 2600 hours of lectures and TDs at Versailles University, Paris-Sud University, Polytech Paris-Sud and Paris Diderot university. I have taught the following topics and created several of the courses (programming, algorithms, decidability and algorithmic game theory):

Master: Algorithmic game theory. Algorithms. Operational research, optimisation and randomised algorithms. Databases. XML and web programming. Compilers. Simulation. Supervised research projects.

Bachelor: Algorithms and data structures. Graph algorithms. Graph theory. Advanced algorithms. Language theory. Decidability and complexity. Python programming. C programming. Object oriented programming (JAVA). System and logic. Introduction to computer science. Data representation. Supervised research projects.

Misc.: Formation of high school teachers (automata, complexity, decidability, advanced algorithms) to enable them to teach computer science (optional courses for lycée and classes préparatoires). Khôlles of mathematics (oral examination) in MPSI.

Teaching responsabilities:
- In charge of first year courses with 200 to 600 students.
- In charge of students with disabilities for the bachelor.
- President of Jury for first year students.
- Tutor for first year students.
- Tutor for a PhD student.