Personal information

Surname(s) / First name(s)	**Blanchard, Nicolas K.**
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Email(s)	nicolas.k.blanchard@gmail.com
Nationality(-ies)	French
Date of birth	August 1991

Education

2008–2009	French Scientific Baccalaureate, specialization in Mathematics
2011–2012	Graduated in Computer Science from Paris VII with additional graduate algorithmic and model theory classes
2012–2015	Scolarity at ENS Ulm through the Maths-CpSci Concours (ranked 9th) and MPRI (Parisian Master of Research in Computer Science) with a focus on theoretical computer science
2014–2015	MPRI Diploma, *summa cum laude*, Ranked 2nd/61 (18.06/20 average)
2015–2019	Internship followed by a PhD in Computer Science at the IRIF, supervised by Prof. Nicolas Schabanel

Coding and Research Projects during my studies

2011–2012	Backend for OpenStreetMaps in Ocaml ; Internal message service for Unix-based systems in C ; wrote an unpublished paper on probabilistic variations of Conway's Angel problem and of a larger set of combinatorial games
2012-2013	Implemented our own algorithm (the PN heuristic) for graph isomorphism detection ; coded a net-list simulator and designed our micro-processor (mostly in Ocaml and C) ; research project at ENS with David Naccache in finding space-filling functions (in cryptography)

Work Experience and Internships

2009–2011	Freelance web designer and computer technician for small companies
Summer of 2013	Internship in the Technion, Israel, under Prof. Eldar Fischer. Main work on longest paths and cycles in k-connected graphs [BFL17]
Summer of 2013	Work with Prof. Janos Makowsky on graph polynomials [MRB14]
Summer of 2014	Internship in the IMSC, India, under Prof. Saket Saurabh, on graph theory and parameterized algorithms
2015-2016	Internship in the LIAFA, France, under Prof. Nicolas Schabanel, on dynamic facility location [BS16]

Academic and Research Groups

2016–2019	PhD student, IRIF in the Distributed algorithms and Graphs team
2015–20XX	Secretary, Archive of Research in Mathematical Sciences and Philosophy
2016–20XX	Member, Random Sample Voting Project (rsvoting.org)
2016–20XX	Founding member, POP Special Exploratory Committee (poplatform.org)

Research Publications

Published	Johann A Makowsky, Elena V Ravve, and Nicolas K Blanchard. On the location of roots of graph polynomials. *European Journal of Combinatorics*, 41:1–19, 2014
	Nicolas K. Blanchard and Nicolas Schabanel. Clustering Dynamique par Rayon. In *ALGOTEL 2016 - 18èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications*, Bayonne, France, 2016
	Nicolas K. Blanchard. Vote par sondage uniforme incorruptible. In *ALGOTEL 2016 - 18èmes Rencontres Francophones sur les Aspects Algorithmiques des Télécommunications*, Bayonne, France, 2016
	Nicolas K. Blanchard and Nicolas Schabanel. Dynamic Sum-Radii Clustering. In Sheung-Hung Poon, Md. Saidur Rahman, and Hsu-Chun Yen, editors, *WALCOM: Algorithms and Computation: 11th International Conference and Workshops, WALCOM 2017, Hsinchu, Taiwan, March 29–31, 2017, Proceedings*, pages 30–41. Springer International Publishing, 2017
	Nicolas K. Blanchard. Building trust for sample voting. In *Proceedings of TeSS*, 2017
Submitted	Nicolas K. Blanchard. La Démocratie Hasardeuse (book). 2017
	Nicolas K. Blanchard, Ted Selker, and Leila Gabasova. CVC for Error-Free Code Entry. 2017
	Nicolas K. Blanchard and Olivier Pivot. CIVICS : Changing Incentives for Voters in International Cooperation through Sampling. 2017
In writing	Nicolas K. Blanchard, Eldar Fischer, and Oded Lachish. Longest paths and cycles in k-connected graphs. 2017

Public Interventions

2016	Multiple talks, member of an expert panel and organizer of the first public RSV vote at the Global Forum on Modern Direct Democracy
2017	Invited talk at a conference on new forms of citizen participation at the Lieu d'Europe
	Invited member of an expert panel and in charge of large-scale RSV demo at the World Forum on Democracy

Popularization

	Nicolas K. Blanchard. Le théorème des graphes parfaits. *Bibliothèque Tangente*, 54:62–67, 2015
	Nicolas K. Blanchard. Prouver rapidement qu'une propriété est vérifiée... ou pas. *Bibliothèque Tangente*, 55:132–133, 2015
	Nicolas K. Blanchard. De Poincaré à Perelman : une grande épopée mathématique. *Tangente*, 165:48–50, 2015

Nicolas K. Blanchard. Non, les problèmes ne sont pas tous de même difficulté! *Bibliothèque Tangente*, 55:108–114, 2015

Nicolas K. Blanchard. Même le hasard peut créer des certitudes. *Bibliothèque Tangente*, 55:116–118, 2015

Nicolas K. Blanchard and Leila Gabasova. Des outils mathématiques pour votre GPS. *CIJM yearly journal*, 2016

Nicolas K. Blanchard and Leila Gabasova. Democratic tools for the future. *Worldcon 75 poster*, 2017

Teaching

2013-2014	Tutoring in Data Mining
2014-2015	Teaching mathematics to high schoolers at ENS with ParisMaths
2014-2015	Conferences to high school students in Paris with Animaths
2016-2017	Creation of Animath clubs, teaching to educators, university and high-school students in Kosovo and Moldova
Spring 2018	Co-organizer, France-Kosovo Undergraduate Research School of Mathematics, Prishtina
Teaching at EIDD (Diderot engineering school)	
Spring 2016 and Spring 2017	In charge of the M1 Systems and Network Engineering course (60 hours)
Summer 2017	Academic supervisor for Elodie Decerle's M2 internship at THALES
Fall 2017	In charge of the M1 Foundations of Computer Science course (60 hours)

Languages

Mother tongue(s)	**French, English**
	Oral proficiency in Spanish, basics in Russian

Computer skills

OS	Linux, Unix, Windows
Programming	OCaml, C, knowledge in Java, Racket and Pascal
Web design	XHTML, CSS, bases in MySQL, PHP and Actionscript

Scientific Interests

Mathematics and CpSci	Graph Theory, Algorithmic, Game theory and Combinatorial Games. Logic and Model Theory. Voting and Computational Social Choice Theory. Probabilities. Bioinformatics.
Social sciences	Cliometrics. Political philosophy. Ancient Greek History.

Personal Interests

Games of all sorts	I love nearly all card and board games but my favorite is Go
Writing	I enjoy developing realistic AU, and am writing an interactive fiction with O. Pivot
Photography	I've done a few exhibits, which are partly on my website (koliaza.com)
Music	I sing and play the piano and melodica, specializing in blues