

**BENJAMIN GIRARD**

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EMPLOYMENT

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2009 - Associate Professor of Mathematics, Université Pierre et Marie Curie (Paris 6).

EDUCATION

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2008 - 2009 City University of New York (CUNY), Graduate Center's Department of Mathematics, postdoctoral stay under the supervision of Melvyn B. Nathanson.

2005 - 2008 École Polytechnique (Paris), Ph.D. and Teaching Assistantship, Mathematics.  
*Thesis title:* "On some combinatorial aspects of non-unique factorization theory"  
*Thesis advisor:* Alain Plagne.

2002 - 2005 Degree from the École Nationale de la Statistique et de l'Administration Économique (Paris). Majors of applied mathematics.

2002 - 2005 Degree from Université Pierre et Marie Curie (Paris 6). Majors of pure and applied mathematics.

1999 - 2002 Classes Préparatoires Lycée Louis-le-Grand (Paris), general scientific studies.

FELLOWSHIPS AND GRANTS

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2012 - 2015 ANR Project "CAESAR" No. ANR-12-BS01-0011, led by Alain Plagne.

2009 Fellowship awarded by IPAM for its Fall Program in Combinatorics (Los Angeles).

2008 One-year postdoctoral grant awarded by the École Polytechnique (Paris).

PUBLICATIONS

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1. *Inverse zero-sum problems and algebraic invariants*, Acta Arith. **135** (2008), 231-246.
2. *A new upper bound for the cross number of finite Abelian groups*, Israel J. Math. **172** (2009), 253-278.
3. *Inverse zero-sum problems in finite Abelian  $p$ -groups*, Colloq. Math. **120** (2010), 7-21.
4. *On the existence of distinct lengths zero-sum subsequences*, Rocky Mountain J. Math. **42** (2012), 583-596.
5. *On a combinatorial problem of Erdős, Kleitman and Lemke*, Adv. Math. **231** (2012), 1843-1857.

6. *k*-sums in Abelian groups, with Simon Griffiths and Yahyaould Hamidoune, *Combin. Probab. Comput.* **21** (2012), 582-596.
7. *Subset sums in Abelian groups*, with Éric Balandraud, Simon Griffiths and Yahyaould Hamidoune, Special volume in honor of Yahyaould Hamidoune, *European J. Combin.* **34** (2013), 1269-1286.
8. *A nullstellensatz for sequences over  $\mathbb{F}_p$* , with Éric Balandraud, *Combinatorica* **34** (2014), 657-688.
9. *An asymptotically tight bound for the Davenport constant*, *J. Éc. polytech. Math.* **5** (2018), 605-611.
10. *Direct zero-sum problems for certain groups of rank three*, with Wolfgang A. Schmid, submitted. arXiv:1806.07636

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INVITED TALKS

- Jun 12, 2018, AMS-CMS Joint International Meeting, Additive Combinatorics including its Interplay with Factorization Theory, Shanghai (Fudan University).
- Feb 4, 2016, Nancy-Metz Number Theory Seminar, Nancy (IECL).
- Nov 8, 2012, Algebra and Number Theory Seminar, Graz (KFU).
- Oct 18, 2012, "CAESAR" Additive Combinatorics Seminar, Paris (École Polytechnique).
- Aug 30, 2012, New York Number Theory Seminar (CUNY).
- Jun 14, 2012, Combinatorics Reunion Conference, Lake Arrowhead (UCLA).
- Jun 15, 2011, Combinatorics Reunion Conference, Lake Arrowhead (UCLA).
- Mar 29, 2011, One Day Conference in Memory of Yahya Ould Hamidoune, Paris (UPMC).
- Jan 24, 2011, Number Theory Seminar, Saint-Étienne (LaMUSE).
- Dec 9, 2010, "CAESAR" Additive Combinatorics Seminar, Paris (École Polytechnique).
- Dec 7, 2009, IPAM's Workshop in Combinatorics, Lake Arrowhead (UCLA).
- Nov 20, 2008, New York Number Theory Seminar (CUNY).
- Jun 2, 2008, Analytic and Elementary Number Theory Seminar, Paris (IHP).
- May 23, 2008, Combinatorial and Additive Number Theory, New York (CUNY).
- May 9, 2008, Combinatorics Seminar, Los Angeles (UCLA).
- Jan 31, 2007, CMLS Doctoral Students' Seminar, Paris (École Polytechnique).

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CONFERENCES, SUMMER SCHOOLS

- Jun 2018, AMS-CMS Joint International Meeting, Additive Combinatorics including its Interplay with Factorization Theory, Shanghai (Fudan University).
- Apr 2016, Additive Combinatorics in Bordeaux 2016, Bordeaux (IMB).
- Jan 2016, Combinatorial and Additive Number Theory 2016, Graz (KFU).
- Sep 2015, Additive Combinatorics in Marseille 2015, Luminy (CIRM).

May 2014, Stéphanois Workshop in Additive Combinatorics, Saint-Étienne (UJM).  
Jul 2012, Additive Combinatorics in Paris 2012, Institut Henri Poincaré (organizer).  
Jun 2012, Combinatorics, Methods and Applications in Mathematics and Computer Science, second reunion conference, Lake Arrowhead (UCLA).  
Jun 2011, Combinatorics, Methods and Applications in Mathematics and Computer Science, first reunion conference, Lake Arrowhead (UCLA).  
Fall 2009, Combinatorics, Methods and Applications in Mathematics and Computer Science, Los Angeles (IPAM).  
Feb 2008, Doccourse in Additive Combinatorics and Geometry, Barcelona (CRM).  
Jun 2007, Conference on Analytic Number Theory, Saint-Étienne (LaMUSE).  
Sep 2006, International Conference on Analytic Number Theory, Luminy (CIRM).  
Jun 2006, Workshop on Arithmetic and Combinatorics, Saint-Étienne (LaMUSE).  
Oct 2005, Interface between Harmonic Analysis and Number Theory, Luminy (CIRM).

#### TEACHING EXPERIENCE

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2009 - Associate Professor at Université Pierre et Marie Curie (Paris 6).  
- Spring 2010 - 2018, Fall 2017, Graphs and Combinatorics.  
- Fall 2013 - 2016, Spring 2016 - 2018, Supervised practical works in Group Theory.  
- Fall 2010 - 2011, Fall 2013 - 2015, Supervised practical works in Number Theory.  
- Fall 2015 - 2017, Supervised practical works in Coding Theory.  
- Spring 2010, Supervised practical works in Combinatorial Optimization.

2005 - 2008 Teaching Assistant at École Polytechnique (Paris).  
- Supervised practical works in Algebra, Analysis, Probability and Optimization.  
- Practicals in Computer Science (Scilab), grading papers.

2003 - 2004 Oral examiner in Classes Préparatoires, Lycée Louis-le-Grand, Mathematics.