

Thomas FERNIQUE
Laboratoire d'Informatique de Paris-Nord
99, avenue Jean-Baptiste Clément
93430 Villetaneuse, France

Born january 8, 1981, Paris
French nationality

thomas.fernique@lipn.univ-paris13.fr
<http://www.lipn.univ-paris13.fr/~fernique>

Actual position: Junior researcher CNRS at LIPN, Paris, France.

Past positions and education

- Junior researcher CNRS at Poncelet lab., Moscow, Russie (2010–2011)
- Junior researcher CNRS at LIF, Marseille, France (2008–2010)
- Ph.D. in computer science at LIRMM, Montpellier (2004–2007)
- Student at École Normale Supérieure de Lyon (2001–2004)

Grants

- ANR QuasiCool (2013–2017)
- PEPS Stochasflip (2009–2010)

Scientific event organization

- thematic month Transversal Aspects of Tilings, Oléron, France, june 2016
- Summer school Tilings and Tessellations, Isfahan, Iran, august 2015
- Thematic month Math-Info, Marseille, France, february 2010
- two french-russian workshops, Moscow, Russia, june 2010 & 2013

Students

- Victor Lutfalla, research internship, february-july 2017
- Ilya Galanov, Ph.D. in Computer Science, (2016–)
- Alexandra Ugolnikova, Ph.D. in Computer Science, (2013–2016)
- Jill-Jen Vie, research internship, july 2009

Teaching

- Dubna's summer school, Russia (2012–)
- Master 2 ENS Lyon (graduate students, 2015)
- Independent University of Moscow (graduate students, 2012)
- Moscow State University (Ph.D. students, 2011)
- Popular science “maths en jeans” (2010–)
- École Jeunes Chercheurs (Ph.D. students, 2010)
- Université de Montpellier (undergraduate students, 2005–2008)

Selected publications

1. Th. Fernique, M. Sablik, *Weak colored local rules for planar tilings*, to appear in Ergodic Theory and Dynamical Systems
2. N. Bédaride, Th. Fernique, *Weak local rules for planar octagonal tilings*, to appear in Israel Journal of Mathematics
3. N. Bédaride, Th. Fernique, *No weak local rules for $4p$ -fold tilings*, Discrete and Computational Geometry **54** (2015), pp. 980–992
4. N. Bédaride, Th. Fernique, *When periodicities enforce aperiodicity*, Communications in Mathematical Physics **335** (2015), pp. 1099–1120
5. N. Bédaride, Th. Fernique, *The Ammann-Beenker tilings revisited*, in Aperiodic Crystals S. Schmid, R. L. Withers, R. Lifshitz eds. (2013), pp. 59–65.
6. O. Bodini, Th. Fernique, M. Rao, E. Rémila, *Distances on rhombus tilings*, Theoretical Computer Science **412** (2011), pp. 4787–4794
7. V. Berthé, Th. Fernique, *Brun expansions of stepped surfaces*, Discrete Mathematics **311** (2011), pp. 521–543
8. Th. Fernique, N. Ollinger, *Combinatorial substitutions and sofic tilings*, in proceedings of JAC’10, (2010), Turku, Finland
9. Th. Fernique, D. Regnault, *Stochastic flips on dimer tilings*, in proceedings of AofA’10, (2010), Vienna, Austria
10. O. Bodini, Th. Fernique, D. Regnault, *Stochastic flips on two-letter words*, in proceedings of ANALCO’10 (2010), Austin, USA
11. Th. Fernique, *Generation and recognition of digital planes using multi-dimensional continued fractions*, Pattern Recognition **42** (2009), pp. 2229–2238
12. O. Bodini, Th. Fernique, E. Rémila, *A Characterization of flip-accessibility for rhombus tilings of the whole plane*, Information and Computation **206** (2008), pp. 1065–1073
13. P. Arnoux, V. Berthé, Th. Fernique, D. Jamet, *Functional stepped surfaces, flips and generalized substitutions*, Theoretical Computer Science **380** (2007), pp. 251–265
14. Th. Fernique, *Local rule substitutions and stepped surfaces*, Theoretical Computer Science **380** (2007), pp. 317–329
15. Th. Fernique, *Multidimensional Sturmian sequences and generalized substitutions*, International Journal of Foundations of Computer Science **17** (2006), pp. 575–600