

# Anthony Poëls

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## Education and qualification

- 2022 – **Maître de conférence (Associate Professor)**, *University Claude-Bernard Lyon 1*, Villeurbanne (France), member of the team Combinatorics and Number Theory
- 2021–2022 **Postdoc position (JSPS/CNRS)**, *Nihon University*, Tokyo (Japan), Supervisor: Noriko Hirata-Kohno
- 2020–2021 **Postdoc position**, *University of Ottawa*, Ottawa (Canada), Supervisor: Damien Roy
- 2018–2020 **Postdoc position**, *University of Ottawa*, Ottawa (Canada), Supervisors: Daniel Fiorilli and Damien Roy
- 2015–2018 **PhD Student in Mathematics**, *Paris-Sud University*, Orsay, Supervisor: Stéphane Fischler  
Title: Applications of parametric geometry of numbers to diophantine approximation. Defense date: 18th May 2018
- 2014–2015 **Master 2 Research on Fundamental Mathematics (Master's degree)**, *Faculty of the Institut de Mathématiques de Jussieu*, Paris, *magna cum laude*  
Most areas of pure mathematics are covered
- 2013 **Agrégation of Mathematics**, *Ecole Normale Supérieure*, Lyon, Rank: 4th  
The *agrégation* is a competitive civil service examination granting the highest teaching position in the French academic public system.
- 2011–2014 **Master in Mathematics (Master's degree)**, *Ecole Normale Supérieure*, Lyon, *magna cum laude*  
I also passed the *agrégation* of Mathematics, see above.
- 2011 **Bachelor's degree in Mathematics, equivalent to a Bachelor of Science Degree in Mathematics**, *Ecole Normale Supérieure (university-level institution training teachers and researchers, entrance to which is based on a competitive exam)*, Lyon, *magna cum laude*
- 2010 **Competitive entrance exam's result**, Paris  
Admitted to the ENSL (*Ecole Normale Supérieure de Lyon*). Also admitted to the *Ecole Polytechnique*
- 2008–2010 **Classe préparatoire in Mathematics, Physics and Computer Science**, *Lycée Louis Le Grand*, Paris  
Post-secondary education in preparatory classes in science for competitive entrance exam to ENS and engineering schools.
- 2008 **French Baccalaureate in Science**, *Lycée Augustin Thierry*, Blois, *With highest honours*  
Majors: Maths, Physics, Chemistry

## Internships

- 2014–2015 **Internship (second year of Master)**, *On Parametric geometry of numbers*, Orsay, Supervisor: Stéphane Fischler
- 2011–2012 **Internship (first year of Master)**, *Subject: On Hardy's theorem (analytic number theory)*, Grenoble, Supervisor: Tanguy Rivoal

- 2010–2011 **Internship (for Bachelor's degree)**, *On irrationality of  $\zeta(3)$* , Lyon, Supervisor: Frédéric Jouhet  
Personal contribution: extension of Poincaré's theorem (on linear recurrences with non constant coefficients)
- 2009–2010 **Personal project**, *Personal project on the localisation of the zeros of the Riemann Zeta function*, Paris

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## Publications

- M. Kawashima et A. Poëls, On the linear independence of p-adic polygamma values. *arXiv:2410.06789 [math.NT] (submitted)*, 2024.
- A. Poëls, On approximation to a real number by algebraic numbers of bounded degree. *Ann. of Math.*, vol. 201(1), p. 307-330, 2025.
- A. Poëls, On uniform polynomial approximation. *J. Éc. polytech. Math.*, vol. 11, p.769–807, 2024.
- N. Hirata-Kohno, M. Kawashima, A. Poëls, Y. Washio  $S$ -unit equation in two variables and Padé approximations . *Int. J. Number Theory*, vol. 19, no 10, p. 2427–2442, 2023.
- A. Poëls and D. Roy. Parametric geometry of numbers over a number field and extension of scalars. *Bull. Soc. Math. Fr.*, vol 151, p. 257–303, 2023.
- M. Kawashima and A. Poëls. Padé approximation for a class of hypergeometric functions and parametric geometry of numbers. *J. Number Theory*, 243, 646-687, 2023.
- A. Poëls and D. Roy. Simultaneous rational approximation to successive powers of a real number. *Trans. Amer. Math. Soc.*, vol. 375, no 09, p.6385-6415, 2022.
- A. Poëls. Exponents of Diophantine approximation in dimension two for a general class of numbers. *Mosc. J. Comb. Number Theory*, 11(1), 37-69, 2022.
- A. Poëls and D. Roy. Rational approximation to real points on quadratic hypersurfaces. *Lond. Math. Soc.*, 103(2) :672–696, 2021.
- A. Poëls. A class of maximally singular sets for rational approximation. *Int. J. Number*, 16(09) :2005–2012, 2020.
- N. Van Nguyen and Poëls and D. Roy. A transference principle for simultaneous rational approximation. *J. Théor. Nombres Bordeaux*, 32(2) :387–402, 2020.
- A. Poëls. A new exponent of simultaneous rational approximation. *Acta Arith.*, 192(2) :165–179, 2020.
- A. Poëls. Exponents of Diophantine approximation in dimension 2 for numbers of Sturmian type. *Math. Z.*, 294(3) :951–993, 2020.
- A. Poëls. The complex case of Schmidt's going-down Theorem. *Monatsh. Math.*, 184(4):649–666, 2017.

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## Foreign languages

- French Mother tongue  
English Good command of scientific english

German Basics communication skills

## Programming languages

LaTeX Proficient (LaTeX is used for writing scientific documents)  
Maple Proficient  
PHP Proficient  
HTML&CSS Proficient  
Javascript Reasonable working knowledge  
(jQuery)

## Talks

- 10–14th Nov. 2025 **CIRM**, TBA, Luminy (France)
- 27th Mar. 2025 **Lyon-Tokyo conference Number Theory and Arithmetic Geometry**, *On approximation to a real number by algebraic numbers of bounded degree*, Ecole Normale Supérieure de Lyon
- 27th Feb. 2025 **Séminaire de l'équipe Arithmétique et Géométrie Algébrique**, *Sur la conjecture de Wirsing*, Strasbourg University
- 27th Jan. 2025 **Séminaire de théorie des nombres de l'IMJ-PRG**, *Sur la conjecture de Wirsing*, Institut des Mathématiques de Jussieu (Paris)
- 24th Jan. 2025 **Séminaire de théorie des nombres du LMNO**, *Approximation d'un nombre réel par des nombres algébriques*, Laboratoire de mathématiques Nicolas Oresme (Caen)
- 23rd August 2024 **UNSW number theory seminar**, *On approximation to a real number by algebraic numbers of bounded degree*, UNSW Sydney (Australia)
- 11th June 2024 **SAGA**, *Approximation d'un nombre réel par des nombres algébriques de degré borné*, University Paris-Sud (Orsay)
- 21st May 2024 **Séminaire CTN**, *Un pas vers la conjecture de Wirsing*, University Claude Bernard Lyon 1
- 15th March 2024 **Seminar COOL**, *Approximation polynomiale uniforme*, Institut Henri Poincaré (Paris)
- 22nd Feb. 2024 **Seminar ADA**, *Approximation polynomiale uniforme*, Université du Littoral Côte d'Opale
- 4th Dec. 2023 **Thémiaire**, *Approximation simultanée d'un nombre et de son carré*, ENS de Lyon
- 27th March 2023 **Effective Aspects in Diophantine Approximation (conference)**, *Padé approximation for a class of hypergeometric functions*, Lyon 1 University
- 10th Nov. 2022 **Number theory seminar of Grenoble**, *Approximation rationnelle des points d'une hypersurface quadratique*, Institut Fourier, France
- 29th Sep. 2022 **Number theory seminar of Ecole Normale Supérieure de Lyon**, *Approximation simultanée des puissances successives d'un nombre réel*, ENS, Lyon, France
- 19th August 2022 **28th Nordic Congress of Mathematicians**, *Simultaneous rational approximation to successive powers of a real number*, (Université Aalto, Finlande (online))
- 21th April 2022 **Oberwolfach Workshop 2216 - Diophantische Approximationen**, *Simultaneous rational approximation to successive powers of a real number*, (Oberwolfach, Allemagne)

- 29th March 2022 **Seminar of combinatorics and number theory (ICJ)**, *Géométrie paramétrique des nombres sur un corps de nombres*, (Lyon, France)
- 2nd Feb. 2022 **Days of Transcendence (à l'occasion du 75ème anniversaire du Professeur Yuri Nesterenko)**, *Simultaneous rational approximation to successive powers of a real number*, (Moscow, en ligne)
- 7th Jan. 2022 **Friday Tea Time Zoom Seminar**, *From a false conjecture to Roy's Extremal Numbers*, (Japon, en ligne), <https://sites.google.com/view/fridayteatime/>
- 8th Dec. 2021 **number theory seminar of Nihon University**, *On a variant of Wirsing's Problem*, (Tokyo, Japan)
- 8th Oct. 2021 **seminar DAHD**, *Simultaneous rational approximation to successive powers of a real number*, (York, UK, en ligne)
- 9th June 2021 **Réunion d'été du 75e + 1 anniversaire de la SMC**, *Approximation diophantienne et hypersurfaces quadratiques*, (Ottawa, Canada, online)
- 20th Feb. 2021 **seminar DARF**, *On Sturmian numbers*, (Japan, via Zoom)
- 02nd Feb. 2021 **Japan Europe Number Theory Exchange Seminar**, *Rational approximation to real points on quadratic hypersurfaces*, (via Zoom)
- 25 June 2020 **Moscow number theory seminar**, *Rational approximation to real points on quadratic hypersurfaces*, (via Zoom)
- 16th Nov. 2018 **Ottawa (Canada) Number Theory Seminar**, *Diophantine exponents of approximation to a real number and to its square*, University of Ottawa, CANADA
- 6th June 2018 **École Jeunes Chercheurs en théorie des nombres**, *Exposants d'approximation diophantienne en dimension 2 associés à un nombre et son carré*, Université de Besançon, FRANCE
- 20th March 2018 **York (UK) Number Theory Seminar**, *Diophantine exponents of approximation in dimension 2 related to a real number and its square*, University of York, UNITED KINGDOM
- 5th March 2018 **GEPbD**, *Exposants diophantiens pour l'approximation d'un nombre et de son carré*, Universities of Pierre-and-Marie-Curie (Jussieu) and Paris-Diderot, Paris, FRANCE
- 24th Nov. 2016 **PhD Seminar**, *Introduction à la géométrie paramétrique des nombres*, University of Paris-Sud, Orsay, FRANCE
- 23th Sep. 2015 **Groupe d'Etude sur les Problèmes Diophantiens (GEPbD)**, *Sur les outils de la géométrie paramétrique des nombres*, University of Pierre-and-Marie-Curie (Jussieu), Paris, FRANCE

## Conferences attended

- 24–28 Mars 2025 **Lyon-Tokyo workshop in Number Theory and Arithmetic Geometry Number Theory**, *ÉNS de Lyon*, Organizers : L. Berger, S. Rozensatjn, B. Shraen et T. Tsuji
- 19–21 Nov. 2024 **Number Theory conference: analytic, additive, diophantine aspects and related areas**, *University Jean Monnet, St-Etienne*, Organizers : D. Essouabri, F. Hennecart, M. Munsch et O. Robert
- 3 – 7 June 2024 **Diophantine Approximation, Fractal Geometry and Related topics**, *University Gustave Eiffel, Marne*, Organizers : F. Adiceam, R. Aoun, A. Marnat
- 27 – 31 March 2023 **Effective Aspects in Diophantine Approximation**, *University Claude-Bernard Lyon 1, Lyon*, Organizers : B. Adamczewski, A. Bostan, B. Salvy, W. Zudilin

- 5 - 10 February 2023 **Diophantine Analysis, Dynamics and Related Topics**, *Technion Israel Institute of Technology, Israel*, Organizers : K. Konik, N. Moshchevitin
- 18 - 21 August 2022 **Invited to the 28th Nordic Congress of Mathematicians**, *Aalto University, Finlande*, Organizers : Anne-Maria Ernvall-Hytönen, Pär Kurlberg, Tapani Matala-aho, Morten Risager
- 17 - 23 April 2022 **Invited to Oberwolfach Workshop 2216 - Diophantische Approximationen**, *Oberwolfach, Allemagne*, Organizers : Y. Bugeaud, P. Corvaja, L. DeMarco, P. Habegger
- 31 January-02 February 2022 **Online conference «DAYS of TRANSCENDENCE», , in occasion of Professor Yuri Nesterenko's 75th birthday**, *Moscow, online*, Organizer : Nikolay Moshchevitin
- 7-11 June 2021 **Réunion d'été du 75e + 1 anniversaire de la SMC, Session : Amicale de théorie des nombres en hommage à Robert Langlands**, *Ottawa, CANADA*, Organizers : Lucile Devin, Daniel Fiorilli, Damien Roy et Gary Walsh
- 31 May - 4 June 2021 **Diophantine Analysis and Related Topics**, *Conférence en ligne*, Organizer : Nikolay Moshchevitin
- 5-8 June 2018 **École jeunes chercheurs en théorie des nombres**, *Besançon, FRANCE*, Organizers: C. Armana, A. Galateau et M. Rougnant
- 21-25 May 2018 **Diophantine Geometry (CIRM)**, *Luminy, FRANCE*, Organizers: V. Bosser, M. Carrizosa, E. Gaudron, P. Habegger
- 17-20 October 2017 **XVII<sup>th</sup> Journées Louis Antoine**, *Rennes, FRANCE*, Organizers: J. Angst, S. Cantat, X. Caruso, V. Duchêne, F. Loray, F. Maucourant, L. M. Rodrigues, N. Seguin
- 3-7 July 2017 **XXX<sup>th</sup> Journées Arithmétiques**, *Caen, FRANCE*, Organizers: V. Bosser, B. Deschamps, F. Amoroso, E. Féaux de Lacroix, F.T. Ribeiro
- 20-24 June 2016 **Algèbre et Théorie des nombres, rencontre Lyon-Ottawa**, *Lyon, FRANCE*, Organizers: P. Gille (ICJ, Lyon), D. Roy (University of Ottawa)
- 13-17 June 2016 **Leuca2016 Celebrating Michel Waldschmidt's 70th birthday**, *Patù (Lecce), ITALY*, Organizers: F. Pappalardi, V. Talamanca
- 8-10 June 2016 **École jeunes chercheurs en théorie des nombres**, *Clermont-Ferrand, FRANCE*, Organizers: N. Billerey, E. Gaudron, F. Martin and M. Rebolledo