Adrien Boyer
Curriculum Vitae

Personal Data
Date of birth: May 11, 1985.
Nationality: French
Married to Annelaure
father of Apolline, Paul and Joachim.

Université Paris Cité
IMJ-PRG
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Research
Université de Paris Cité (Paris Diderot, Paris 7), Paris, France

Employment
Associate professor, Geometry and Dynamic team, since September 2017 (current position).

Weizmann Institute of Science, Rehovot, Israel
ERC postdoctoral fellow, 2015-2017
Host: Uri Bader

Technion-Israel Institute of Technology, Haifa, Israel
ERC postdoctoral fellow, 2015-2017
Host: Uri Bader

Education
Aix-Marseille Université, Marseille, France
Ph.D. Laboratoire d’Analyse de Topologie et de Probabilité, July 2014.
Advisor: Professor Christophe Pittet
Dissertation title: On some aspects of Property RD (Rapid Decay) for unitary representations on the Furstenberg-Poisson boundary

Paris Diderot, Paris 7, Paris, France
M.Sc. (Operator algebras) with honors, June 2011.

Université Lyon I, Lyon, France
Agrégation de Mathématiques, July 2010

ENS Lyon, Lyon, France
M.Sc. (Geometry) with honors, June 2009.

Research Interests
Harmonic analysis
Representation theory
Operator algebras
Ergodic theory
Geometric group theory

Publications and preprints


Conferences, Workshops, Talks, Colloquium and Visits

Représentations covariantes et propriété RD, Séminaire Darboux, Université de Montpellier, Montpellier, France (September 2023)

Représentations $L^p$ sur le bord d’espace hyperbolique, Séminaire d’AO, Université de Paris Cité, Paris, France (May 2023)

Représentations $L^p$ sur le bord d’espace hyperbolique, Séminaire d’Analyse fonctionelle, Université de Lille, Lille, France (March 2023)
Topics on boundary representations, Geometry and Topology seminar, KIT, Karlsruhe, Germany (January 2023) Short visit, Host Tobias Hartnick

$L^p$-boundary representations for hyperbolic groups, Seminar, CMAT, Universidad de la República, Montevideo, Uruguay (December 2022) Short visit, Host Rafael Potrie via IFUMI

$L^p$-boundary representations for hyperbolic groups, GDR AFP, Université de Corse, Corte, Corse-France (October 2022)

Riesz operator and spherical representations for hyperbolic groups, Groups and geometry seminar, Université de Genève, Genève, Switzerland (May 2022), Short visit, Host Christophe Pittet

An introduction to boundary representations, North British Geometric Group Theory meeting, Durham University, United Kingdom (April 2022)

Riesz operator and spherical representations for hyperbolic groups, Séminaire de Géométrie dynamique, Laboratoire Paul Painlevé, Lille, France (January 2022)

Estimates of spherical functions, Students seminar, Laboratoire Jean Dieudonné, Nice, France (June 2021)

On the Riesz operator for hyperbolic groups, Séminaire de Géométrie, Topologie et Dynamique, Laboratoire de mathématiques d’Orsay, Orsay, France (October 2020)

On complementary series for hyperbolic groups, Geometry and discrete groups, Talks IHES, Bures-sur-Yvette, France (March 2020)

Some spherical functions on hyperbolic groups, Geometry seminar, Institut mathématique de Bordeaux, Bordeaux, France (November 2019)

Some spherical functions on hyperbolic groups, Geometry seminar, Laboratoire de Mathématiques Jean Leray, Nantes, France (May 2019)

Ergodic theorems à la von Neumann, Inter seminar, Laboratoire de mathématiques du Havre, Le Havre, France (December 2018).

Some spherical functions on hyperbolic groups, Groups and geometry seminar, Université de Genève, Genève, Switzerland (December 2018)

Some spherical functions on hyperbolic groups, Dynamical systems seminar, Institut de Mathématiques de Jussieu, Paris, France (November 2018)

Harish-Chandra’s Schwartz algebras of discrete groups of semisimple Lie groups, Séminaire et groupe de travail GGAO, Université Blaise-Pascal, Clermont-Ferrand, France (December 2017)

A new proof of property RD for hyperbolic groups, Journées de Dynamique, conference, IMJ-PRG, Paris, France (October 2017)
A new proof of property RD for hyperbolic groups, Group theory seminar, ENS Paris, France (October 2017)

A new proof of property RD for hyperbolic groups, Séminaire d’algèbres d’opérateurs, Orléans, France (October 2017)

A new proof of property RD for hyperbolic groups, Séminaire d’analyse et géométrie, Paris 7, Paris, France (September 2017)

On ergodic theorems à la von Neumann, Séminaire de l’équipe de Théorie Ergodique et Systèmes Dynamiques, LAGA, Villetteuse, Paris, France (September 2017)

Monotony of boundary representations, Séminaire d’algèbres d’opérateurs, Paris 7, Paris, France (September 2017)

Certains aspects de la fonction d’Harish-Chandra Séminaire Interne, Université di Pasquale Paoli, Corte, Corse (June 2017)

A new proof a property RD via the boundary IMU conference, speaker in Ergodic theory, Akko, Israel (May 2017)

Harish-Chandra’s Schwartz algebras of discrete groups of semisimple Lie groups, Groups, dynamics and related topics seminar, Technion, Haifa, Israel (January 2017)

Monotony of boundary representations, Action now, Tel Aviv University, Tel Aviv, Israel (January 2017)

On the square root of the Poisson kernel, Intern seminar, Université François Rabelais, Tours, France (October 2016)

Monotony for boundary representations, University of Vienna, Vienna, Austria (October 2016)

Unitary boundary representations in negative curvature, Working Group of geometric group theory, Université d’Orsay, Paris, France (April 2016)

An ergodic theorem for quasi-invariant measures, Intern seminar, Université de Dijon, Dijon, France (April 2016)

An ergodic theorem for quasi-invariant measures, Intern seminar, LAMA, Université d’Amiens, Amiens, France (March 2016)

Monotony for boundary representations of free groups, GAP Seminar, Penn State, State College, United States (March 2016) Short visit, Host Nigel Higson

Monotony for boundary representations of free groups, Intern Seminar, UIC, Chicago, United States (March 2016)

On the boundary representation of the Free group and Monotony, Intern seminar, IMPAN, University of Warsaw, Warsaw, Poland (January 2016)

Théorèmes ergodiques pour des représentations unitaires associées aux bords en courbure négative, Intern seminar, IRMAR, Université de Rennes 1, Rennes,
France (December 2015)

*On the boundary representation of the Free group*, Conference “Random walks and harmonic functions on groups”, IRMAR, EPFL, Lausanne, Switzerland (December 2015)


*A new approach to Monotony of T. Steger and G. Kuhn*, working group, KIT, Karlsruhe, Germany (November 2015)

*A new approach to Monotony of T. Steger and G. Kuhn*, Intern seminar, KIT, Karlsruhe, Germany (November 2015)

*Equidistribution, Ergodicity and Irreducibility in $\text{CAT}(-1)$ spaces*, Groups, dynamics and related topics seminar, Technion, Haifa, Israel (November 2014)

*The rapid decay property and some aspects of ergodic theory: Groups, dynamics and related topics seminar*, Technion, 2014)

*The rapid decay property and some aspects of ergodic theory: the case of $\text{SL}(2, R)$* Teich seminar, FRUMAM, Marseille, France (March 2014)

*The rapid decay property and some aspects of ergodic theory: the case of $\text{SL}(2, R)$*, Haifa, Israel (April 2014)

*The rapid decay property and some aspects of ergodic theory: the case of $\text{SL}(2, R)$* Paroles aux jeunes chercheurs en systèmes dynamiques, CIRM, Marseille, France (December 2013)

*The rapid decay property and some aspects of ergodic theory: the case of $\text{SL}(2, R)$*, Non-commutative geometry seminar, Penn State University, State College, USA (November 2013) Short visit, Host Nigel Higson

*Unitary representation on the Furstenberg boundary: the case of $\text{SL}(2, R)$*, Geometry seminar, CRM, Barcelona, Spain (November 2013)

*Semisimple Lie groups satisfy property RD*, PhD students seminar, Institut Camille Jordan, Lyon, France (February 2013)

*Property RD and the weak inequality of Harish-Chandra*, Intern seminar, University of Wroclaw, Wroclaw, Poland (November 2012)

*Semisimple Lie groups satisfy property RD*, Short lecture, University of Wroclaw, Wroclaw, Poland (November 2012)

**Teaching Experience**

**University of Science and Technology of China (USTC)**

Spring 2022 Lecturer, Introduction to Lie groups and Lie algebras

**Université Paris Cité**
Spring 2023 Teaching assistant, Analysis I  
Fall 2022 Teaching assistant, Affine Geometry  
Fall 2022 Teaching assistant, Algebra I and II  
Fall 2021 Teaching assistant, Analysis I  
Spring 2019-2021 Teaching Assistant, Introduction to algebraic Geometry (Master 1)  
Fall 2019 Teaching assistant, Algebra II  
Spring 2017-2019 Lecturer, Introduction to Differential Geometry  
Spring 2017-2019 Teaching assistant, Differential equations  
Fall 2017 Teaching assistant, Differential Calculus

Aix-Marseille Université

Fall 2013 Lecturer, Calculus II  
Spring 2013 Lecturer, Introduction to Probability Theory  
Fall 2012 Linear Algebra I  
Fall 2011 Teaching assistant, Calculus I

Professional activities

Member of the Scientific Committee of the Maths Department of Paris Diderot, 2019-20xx.

In charge of a working group in Ergodic Theory for postdocs (Technion), 2014-2015.


Referee for Phd Thesis of Elia Manara, student of Maria Gabriella Kuhn. Member of Phd Thesis committee of Hao Wu, student of Bassam Fayad.

Miscellaneous

Hobbies: Sports (Alpinism, rugby and tennis) and Music Piano Jazz here