

# Adrien Boyer

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- PERSONAL DATA**      Date of birth: May 11, 1985.  
Nationality: French.  
Married to Annelaure, Father of Apolline.
- CONTACT INFORMATION**      Weizmann Institute of Science  
Herzl St 234, Rehovot, 7610001  
Israel  
aadrien.boyer@gmail.com
- RESEARCH INTERESTS**      Ergodic theory; Representation theory; Harmonic analysis; Operator algebras, Geometric group theory.
- RESEARCH EMPLOYMENT**      **Weizmann Institute of Sciences, Rehovot**  
ERC Postdoctoral Fellow, October 2015 (current position)  
Host: U. Bader
- Technion, Israel Institute of Technology, Haifa**  
ERC Postdoctoral Fellow, October 2014  
Host: U. Bader
- EDUCATION**      **Aix-Marseille Université**  
Laboratoire d'Analyse de Topologie et de Probabilités  
Ph.D. in Mathematics (July 2014)  
• Dissertation topic: On some aspects of Property RD (Rapid Decay) for unitary representations on the Furstenberg-Poisson boundary  
• Advisor: C. Pittet
- Université Paris VII, Paris**  
M.S. in Fundamental Mathematics (Operator Algebras) with honors, June 2011
- Université Lyon I, Lyon**  
Agrégation de Mathématiques (highly competitive teaching exam), July 2010
- Ecole Normale Supérieure de Lyon**  
B.A. in Mathematics, M.S in Fundamental Mathematics (Geometry) with honors, June 2009
- PUBLICATIONS AND PREPRINTS**      A. Boyer, *Semisimple Lie groups satisfy property RD, a short proof*, Comptes Rendus Mathématique, Volume 351, Issue 9, Pages 335-338 (2013).
- A. Boyer, *Quasi-regular representations and property RD*, Potential Analysis, 2015.
- A. Boyer, *Equidistribution, Ergodicity and Irreducibility CAT(-1) spaces*, preprint, arXiv:1412.8229 [math.GR] (December 2014).
- A. Boyer, *On the square root of Poisson kernel in  $\delta$ -hyperbolic spaces and some aspects of boundary representations*, preprint, arXiv:1505.00739 [math.GR] (May 2015).

A. Boyer and A. Pinochet-Lobos, *An ergodic theorem for boundary representations of the free groups*, preprint, arXiv:1601.00668.

A. Boyer and D. Mayeda, *Irreducibility of boundary representations associated with Gibbs stream*, preprint, arXiv:1601.02275.

A. Boyer, *Equidistribution and Monotony of boundary representations*, work in progress.

A. Boyer, G. Link and C. Pittet, *Ergodic properties of boundary representations*, work in progress.

CONFERENCE  
TALKS

*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*,

Conférence “Random walks and harmonic functions on groups”, IRMAR, EPFL, Lausanne, Suisse  
(December 2015)

*Un théorème ergodique pour des représentations unitaires associées aux mesures de Gibbs*,

Paroles aux jeunes chercheurs en systèmes dynamiques, Institut J-A. Dieudonné, Nice, France  
(November 2015)

*A new approach to Monotony of T. Steger and G. Kuhn*, working group, KIT, Karlsruhe, Allemagne

(November 2015)

*A new approach to Monotony of T. Steger and G. Kuhn*, Intern seminar, KIT, Karlsruhe, Allemagne

(November 2015)

*Equidistribution, Ergodicity and Irreducibility in CAT(-1) spaces*,

Groups, dynamics and related topics seminar, Technion, Haifa, Israel  
(November 2014)

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

Groups, dynamics and related topics seminar, Technion, Haifa, Israel  
(April 2014)

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

Teich seminar, FRUMAM, Marseille, France  
(March 2014)

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

Paroles aux jeunes chercheurs en systèmes dynamiques, CIRM, Marseille, France  
(November 2013)

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

Non-commutative geometry seminar, Penn State University, State College, USA  
(November 2013)

*Unitary representation on the Furstenberg boundary: the case of  $SL(2, \mathbb{R})$ ,*  
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)

OTHER TALKS

*Equidistribution, Ergodicity and Irreducibility in  $CAT(-1)$  spaces,*  
Improvised seminar, University of Notre-Dame, South Bend, USA  
(June 2015)

*Sur la décroissance de certains coefficients dans  $SL(2, \mathbb{R})$ ,* Séminaire Teich, LAMP, Marseille, France (June 2012)

*Unitary representations of  $SO(n, 1)$  and  $SU(n, 1)$ , after Y. Shalom,* working group, Institut de Mathématiques de Luminy, Marseille, France (November 2011)

*Uniqueness of the  $II_1$  hyperfinite factor, after Murray and von Neumann,* working group, Algèbres de von Neumann, Institut de Mathématiques de Jussieu, Paris, France (June 2012)

*Relative property (T) for  $(\mathbb{Z}^2, \mathbb{Z}^2 \rtimes SL(2, \mathbb{Z}))$ ,* working group, Unité de Mathématiques Pures et Appliqués, Lyon, France (April 2008)

TEACHING  
EXPERIENCE

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

GRADUATE  
COURSEWORK

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|---------------------|-------------------------|
| • Real Variables    | • Differential Geometry |
| • Complex Variables | • Topology              |
| • Linear Algebra    | • Ergodic Theory        |
| • Operator Algebras |                         |

MISCELLANEOUS

Responsibilities: In charge of a working group in ergodic theory for postdocs (Technion).

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