

# Jacopo Bassi

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Born on 01/07/1987 in Roma, Italy  
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<b>Research Interests</b>	Operator Algebras and their connection with Group Theory, Dynamical Systems, Non-Commutative Geometry and Physics
<b>Work</b>	<p><b>Postdoc</b> from Sep 2020 at Università degli Studi di Roma "Tor Vergata"</p> <p><b>Postdoc</b> Mar 2019 - Feb 2020 at Università degli Studi di Roma "Tor Vergata"</p> <p><b>Research Collaborator</b> May 2018 at Università degli Studi di Roma "Tor Vergata"</p>
<b>Grants and Awards</b>	<p><b>Beyond Borders</b> Jan 2020 - Jul 2021 "A geometric approach to Harmonic Analysis and Spectral Theory on trees and graphs", Università degli Studi di Roma "Tor Vergata", Principal Investigator: Prof. Florin Rădulescu</p> <p><b>Beyond Borders</b> Dec 2019 - Dec 2021 "Interactions of Operator Algebras with Quantum Physics and Noncommutative Structure", Università degli Studi di Roma "Tor Vergata", Principal Investigator: Prof. Yoh Tanimoto</p> <p><b>INdAM Fellowship</b> Oct 2018 - Dec 2018 "Concorso a n. 21 mensilità di borse di studio per l'estero per l'a.a. 2018-2019", Host University: WWU, Münster, Germany, Host: Prof. Dr. Wilhelm Winter</p>
<b>Teaching Experience</b>	<p><b>Teacher (3 CFUs)</b> Winter 2020 of the course "Mathematical Analysis I" for the students of the "Ingegneria Informatica" bachelor program at Università degli Studi di Roma "Sapienza"</p> <p><b>Tutor</b> Winter 2019 of the course "Mathematical Analysis I" for the students of the "Engineering Sciences" Department at Università degli Studi di Roma "Tor Vergata"</p> <p><b>High School Teacher</b> July 2012 at "Socrate" High School in Rome</p>
<b>Education</b>	<p><b>PhD in Mathematics</b> October 2013 - April 2018 <i>Cum Laude</i>, <b>SISSA</b>, Trieste, Italy / <i>Magna cum Laude</i>, <b>WWU</b>, Münster, Germany - Degree Thesis: "On <math>C^*</math>-Algebras associated to Horocycle Flows" - Supervisors: Prof. Ludwik Dąbrowski, Prof. Dr. Wilhelm Winter</p> <p><b>Master in Mathematics</b> October 2010 - May 2013 <i>110/110 cum Laude</i>, <b>Università degli Studi Roma Tre</b>, Roma, Italy - Degree Thesis: "On the index for <math>II_1</math>-subfactors" - Supervisors: Prof. C. Pinzari, Prof. P. Caputo</p>

## Bachelor in Physics

September 2006 - October 2010

106/110, **Università degli Studi Roma Tre**, Roma, Italy

- Bachelor of Science in Physics, 106/110

- Degree Thesis: “*Dynamical symmetries and accidental degenerations: Kepler’s problem in Classical Mechanics and hydrogen atom in Quantum Physics*”

## Publications and Preprints

J. Bassi and F. Rădulescu, *Separable boundaries for non-hyperbolic groups*, (2021), J. Operator Theory (to appear), online version: <https://arxiv.org/abs/2002.01466>

J. Bassi, *On  $C^*$ -algebras associated to actions of discrete subgroups of  $SL(2, \mathbb{R})$  on the punctured plane*, Math. Scand. **126**:3 (2020), 540–558

J. Bassi, *Remarks on some simple  $C^*$ -algebras admitting a unique lower semicontinuous 2-quasitrace*, Colloq. Math. **165**:1 (2021), 53–62

J. Bassi and L. Dąbrowski, *Spectral triples on the Jiang-Su algebra*, J. Math. Phys. **59**:5 (2018)

J. Bassi and F. Rădulescu, *A mixing property for the action of  $SL(3, \mathbb{Z}) \times SL(3, \mathbb{Z})$  on the Stone-Ćech boundary of  $SL(3, \mathbb{Z})$* , (2021), preprint, <https://arxiv.org/abs/2111.13885>

J. Bassi and R. Conti, *On isometries of spectral triples associated to AF-algebras and crossed products*, (2021), preprint, pdf at the link <https://www.jacopo-bassi.com/publications-and-preprints>

J. Bassi and F. Rădulescu, *An example of a quasi-regular group representation admitting exactly one ideal*, (2021), preprint <https://arxiv.org/abs/2108.13936>

J. Bassi, *Local trivializations of suspended minimal Cantor systems and the stable orbit-breaking subalgebra*, (2020), preprint, <https://arxiv.org/abs/2004.02716>

## Conferences and Invited Talks

Invited speaker “**Seminari di Algebra di Operatori**”, Title: *Amenability properties for  $SL(3, \mathbb{Z})$* , Università degli Studi di Roma “Tor vergata”, Roma, Italy, online (12/05/2021)

Invited speaker “**NCGT seminars**”, Title: *Separable boundaries for non-hyperbolic groups*, Prague, Czech Republic, online (30/03/2021)

Invited speaker “**Operator Theory Seminars**”, Title: *Separable boundaries for non-hyperbolic groups*, Institute of Mathematics of the Romanian Academy, IMAR, Bucharest, Romania, online (17/03/2021)

Invited speaker at the Workshop “**Operator Algebras in Quantum Field Theory and Quantum Probability**”, Title: *Counter-examples to a conjecture by Kalantar and Kennedy*, Università degli Studi di Roma “Tor vergata”, Roma, Italy (07/12/2019)

Conference “**YMC\*A**”, Copenhagen University, Copenhagen, Denmark (05/08/2019-10/08/2019)

Invited speaker “**Weekly seminar of the Mathematical Physics Group**”, Title: *On stability of  $C^*$ -algebras associated to actions of discrete subgroups of  $SL(2, \mathbb{R})$  on  $\mathbb{R}^2 \setminus \{0\}$* , University of Glasgow, Glasgow, Scotland (16/10/2018)

Invited speaker "**Seminario di Algebre di Operatori**", Title: *On  $C^*$ -algebras associated to the action of discrete subgroups of  $SL(2, \mathbb{R})$  on  $\mathbb{R}^2 \setminus \{0\}$* , Università degli Studi di Roma "La Sapienza", Roma, Italy (12/07/2018)

Invited speaker "**Operator Algebras seminar**", Title:  *$C^*$ -algebras associated to horocycle flows*, Università degli Studi di Roma "Tor Vergata", Roma, Italy (16/05/2018)

Invited speaker "**Weekly seminar of the Analysis Group**", Title: *The  $C^*$ -Algebra of the Horocycle Flow*, University of Glasgow, Glasgow, Scotland (05/12/2017)

Invited speaker "**Kleines seminar**", Title: *On  $C^*$ -algebras associated to horocycle flows*, WWU, Münster, Germany (27/11/2017)

Invited speaker "**Kleines seminar**", Title: *Spectral triples on the Jiang-Su algebra*, WWU, Münster, Germany (30/10/2017)

Invited speaker "**NCG seminars**", Title: *The  $C^*$ -algebra of the horocycle flow*, SISSA, Trieste, Italy (24/09/2017)

Invited speaker "**NCG seminars**", Title: *Spectral triples on the Jiang-Su algebra*, SISSA, Trieste, Italy (14/09/2017)

Invited speaker "**NCG seminars**", Title: *Spectral triples on inductive limit  $C^*$ -algebras*, SISSA, Trieste, Italy (29/03/2017)

Workshop " **$C^*$ -Algebras and Dynamical Systems**", Centre de Recerca Matemàtica, Barcelona, Spain(20/03/2017-24/03/2017)

School "**Advanced Course on Operator Algebras: Groupoids, Crossed Products, and Rokhlin Dimension**", Centre de Recerca Matemàtica, Barcelona, Spain (13/03/2017-17/03/2017)

Conference "**Noncommutative Geometry and Applications**", ICTP, Trieste, Italy (27/02/2017-03/03/2017)

Workshop "**Noncommutative Geometry the next Generation**", Będlewo Conference Center, Będlewo and IMPAN, Warsaw, Poland (September-October 2016)

Conference "**YMC\*A**", WWU Münster, Münster, Germany (July 2016)

Invited speaker "**NCG seminars**", Title: *Spectral triples on inductive limit  $C^*$ -algebras*, SISSA, Trieste, Italy (24/06/2016)

Speaker at the Conference "**French-Italian Meeting on Spectral Triples in Noncommutative Geometry**", Title: *"Spectral Triples on the Jiang-Su Algebra"*, Villa Toeplitz, Varese, Italy (02/05/2016-05/05/2016)

School "**Spring School on Algebraic K-Theory of Topological Algebras**", Universität Regensburg, Regensburg, Germany (16/03/2015-20/03/2015)

Conference "**4th Conference of Settat on Operator Algebras and Applications**", Hotel El Andalous, Marrakesh, Morocco (27/01/2015-30/01/2015)

Conference "**Noncommutative Geometry and Applications**",

Villa Mondragone, Frascati, Italy (16/06/2014-21/06/2014)