

Curriculum Vitae - Jacopo Bassi

Born on 01/07/1987 in Roma, Italy
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Research Interests Operator Algebras and their connection with Group Theory, Dynamical Systems, Non-Commutative Geometry

Employment and Fellowships **Postdoc*** 15/11/2023 - 01/01/2024
at Ben-Gurion University of the Negev, Be'er Sheva, IL

Postdoc 01/09/2020 - 01/09/2023
at Università degli Studi di Roma "Tor Vergata", Roma, IT

Postdoc 01/03/2019 - 01/03/2020
at Università degli Studi di Roma "Tor Vergata", Roma, IT

INdAM Fellowship 01/10/2018 - 01/01/2019
"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

Research Collaborator 04/05/2018 - 03/06/2018
at Università degli Studi di Roma "Tor Vergata", Roma, IT

* Interrupted due to the war that is taking place in Israel.

Grants **Tor Vergata Research Grant** 15/03/2022 – 15/03/2024
(€ 16000 total, € 1000 personal)
"Operator algebras and quantum mathematics (OAQM)", Università degli Studi di Roma "Tor Vergata", Principal Investigator: Prof. Yoh Tanimoto.
CUP: E83C22001800005

Beyond Borders 04/01/2021 – 31/12/2022
(€ 4500 total, € 1000 personal)
"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.
CUP: E89C20000690005

Beyond Borders 01/12/2019 – 01/12/2021
(€ 20000 total, € 1000 personal)
"Interactions of Operator Algebras with Quantum Physics and Noncommutative Structure", Università degli Studi di Roma "Tor Vergata", Principal Investigator: Prof. Yoh Tanimoto.
CUP: E84I19002200005

Teaching Experience **Lecturer (3 CFUs)** Winter 2020
of the course "Mathematical Analysis I" for the students of the "Ingegneria Informatica" bachelor program at Università degli Studi di Roma "Sapienza"

Tutor Winter 2019

of the course "*Mathematical Analysis I*" for the students of the "Engineering Sciences" Department at Università degli Studi di Roma "Tor Vergata"

Reviews

since 2023

I am a reviewer for AMS "Mathematical Reviews" and Bollettino dell'Unione Matematica Italiana (BUMI)

Supervision

15/11/2022 - 01/05/2023

I supervised Filip Runjic, a master student from the Centre for the Mathematics of Quantum Theory at the University of Copenhagen, within the Erasmus+ traineeship program. The topic of this traineeship is K -nuclearity for C^* -algebras.

Education

PhD in Mathematics

23/04/2018

Cum Laude, SISSA, Trieste, Italy / *Magna cum Laude*, WWU, Münster, Germany

- Degree Thesis: "*On C^* -Algebras associated to Horocycle Flows*"

- Supervisors: Prof. L. Dąbrowski, Prof. Dr. W. Winter

Master in Mathematics

16/05/2013

110/110 cum Laude, Università degli Studi Roma Tre, Roma, Italy

- Degree Thesis: "*On the index for II_1 -subfactors*"

- Supervisors: Prof. C. Pinzari, Prof. P. Caputo

Bachelor in Physics

19/10/2010

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

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

- Supervisor: Prof. O. Ragnisco

Publications

J. Bassi, R. Conti, C. Farsi and F. Latrémolière, *Isometry groups of inductive limits of metric spectral triples and Gromov-Hausdorff convergence*, (2023), J. Lond. Math. Soc. **108**:4, 1488–1530

J. Bassi and F. Rădulescu, *A mixing property for the action of $SL(3, \mathbb{Z}) \times SL(3, \mathbb{Z})$ on the Stone-Čech boundary of $SL(3, \mathbb{Z})$* , (2024), Int. Math. Res. Not. IMRN, **2024**:1, 234–283

J. Bassi and R. Conti, *On isometries of spectral triples associated to AF -algebras and crossed products*, (2023), to appear in J. Noncommut. Geom., <https://arxiv.org/abs/2301.07644>

J. Bassi, *Local trivializations of suspended minimal Cantor systems and the stable orbit-breaking subalgebra*, Results Math. **78**:43 (2023)

J. Bassi and F. Rădulescu, *An example of a non-amenable dynamical system which is boundary amenable*, Proc. Amer. Math. Soc. **151**:6 (2023), 2459–2462

J. Bassi and F. Rădulescu, *Separable boundaries for non-hyperbolic groups*, J. Operator Theory **87**:2 (2022), 461–470

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)

Preprints J. Bassi, An approach to the study of boundary actions, (2023), <https://arxiv.org/abs/2305.16277>

Research Visits

FAU, Erlangen (DE)	12/07/2023 – 17/07/2023
Università di Siena, Siena (IT)	15/05/2023 – 18/05/2023
University of Glasgow, Glasgow, Scotland (UK)	04/12/2017 – 06/12/2017
University of Glasgow, Glasgow, Scotland (UK)	15/10/2018 – 17/10/2018

Talks Speaker at the Conference “**YMC*A** (lightning talk), Title: *On non-standard extensions of Stone-Čech boundaries*, KU Leuven, Leuven (BE) (07/08/2023)

Invited speaker “**Weekly seminar of the Lie-Groups and Representation Theory Group**”, Title: *Topics on the boundary theory of discrete groups*, Friedrich-Alexander-Universität Erlangen-Nürnberg FAU, Erlangen (DE) (17/07/2023)

Invited speaker “**Seminario di Analisi Matematica dell’Università di Siena**”, Title: *Some topics on group C^* -algebras*, Università di Siena, Siena (IT) (16/05/2023)

Invited speaker “**East China Normal University seminar**”, Title: *On a possible notion of orbit-breaking subalgebra for flows*, East China Normal University, Shanghai (CHN), online (22/04/2022)

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

Invited speaker “**NCGT seminars**”, Title: *Separable boundaries for non-hyperbolic groups*, Charles University in Prague (CZ), 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 (RO), 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 (IT) (07/12/2019)

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 (UK) (16/10/2018)

Invited speaker “**Seminario di Algebra 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 (IT) (12/07/2018)

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

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

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

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

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

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

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

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

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

**Attended
Conferences,
Workshops and
Schools**

Conference "**YMC* A**", KU Leuven, Leuven (BE) (07/08/2023 – 11/08/2023)

Conference "**Group Actions: Dynamics, Measure, Topology**", University of Münster, Münster, Germany (28/11/2022 – 02/12/2022)

Conference "**YMC* A**", Copenhagen University, Copenhagen, Denmark (05/08/2019 – 10/08/2019)

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)

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 Andalou, Marrakesh, Morocco (27/01/2015 – 30/01/2015)

Conference “**Noncommutative Geometry and Applications**”,
Villa Mondragone, Frascati, Italy (16/06/2014 – 21/06/2014)