

## KEVIN AGUYAR BRIX

### PERSONAL DATA:

I was born on September 3, 1990, in Silkeborg, Denmark, my nationality is Danish.  
I am currently residing in Copenhagen, Denmark.

### RESEARCH INTERESTS:

In September 2019, I completed my PhD studies in the Department of Mathematical Sciences at the University of Copenhagen under the supervision of Professor Søren Eilers. My research interests include the study of operator algebras, topological groupoid theory and topological dynamics including shift spaces.

### EDUCATION:

- 2019: Doctor of Philosophy in Mathematics, University of Copenhagen  
Title: *Topological dynamics, groupoids and  $C^*$ -algebras*.  
Supervisor: Professor Søren Eilers.
- 2016: Master of Science in Mathematics, University of Copenhagen.  
Title: *A groupoid approach to Cuntz-Krieger algebras*.  
Supervisor: Professor Søren Eilers.
- 2014: Bachelor of Science in Mathematics, University of Copenhagen.  
Title: *Amenability and growth of finitely generated groups*.  
Supervisor: Associate Professor Magdalena Musat.

### PAPERS:

- ★  *$C^*$ -algebras, groupoids and covers of shift spaces*,  
Kevin Aguyar Brix and Toke Meier Carlsen,  
Submitted for publication, 2019.
- ★ *Eventual conjugacy and the balanced in-split*,  
Kevin Aguyar Brix,  
Preprint, 2019.
- ★  *$C^*$ -simplicity and representations of topological full groups of groupoids*  
Kevin Aguyar Brix and Eduardo Scarparo,  
Published in Journal of Functional Analysis, 2019  
(<https://doi.org/10.1016/j.jfa.2019.06.014>).
- ★ *Cuntz-Krieger algebras and one-sided conjugacy of shifts of finite type and their groupoids*,  
Kevin Aguyar Brix and Toke Meier Carlsen,  
Published in Journal of Australian Mathematical Society, 2019  
(doi:10.1017/S1446788719000168).

RESEARCH TALKS: The following is a list of talks scheduled or presented at various universities on or around my area of research. The marker (P) indicates a participant talk.

- 2019 November: *tba.*, Oberseminar, TWWU Münster, Germany.
- 2019 October: *tba.*, Analysis seminar, KU Leuven, Belgium.
- 2019 Januar: *Various \*-isomorphisms of (groupoid) C\*-algebras*, Analysis seminar, University of Glasgow, Scotland.
- 2018 December: *Various \*-isomorphisms of (groupoid) C\*-algebras*, Danish Operator Algebra Seminar, University of Southern Denmark, Odense, Denmark.
- 2018 September: *Symbolic dynamics and operator algebras*, OA seminar, University of Copenhagen, Denmark.
- 2018 August: *Modelling topological dynamics in groupoids and C\*-algebras*, YMC\*A, KU Leuven, Belgium. (P)
- 2018 June: *C\*-simplicity and representations of topological full groups of groupoids*, Workshop in operator algebras and dynamics, University of the Faroe Islands, Faroe Islands.
- 2018 February: *Modelling symbolic dynamics using C\*-algebras*, Operator algebra seminar, University of Wollongong, Australia.
- 2018 January: *Modelling finite type symbolic dynamics with C\*-algebras*, University of Western Sydney, Australia.
- 2017 December: *Investigating symbolic dynamics using C\*-algebras*, AustMS2017, Macquarie University, Sydney, Australia. (P)
- 2017 December: *One-sided and two-sided dynamics and Cuntz-Krieger algebras*, AMSSC 2017, University of Wollongong, Australia. (P)
- 2017 May: *The C\*-algebra associated to a symbolic dynamical system*, Universitat Autònoma de Barcelona, Spain.
- 2017 January: *C\*-algebras associated to symbolic dynamics*, Aarhus University, Denmark. (P)
- 2016 September: *A groupoid approach to Cuntz-Krieger algebras*, Ph.D seminar, University of Copenhagen, Denmark.

LANGUAGES:

English: Fluent  
Danish: Mother tongue  
Spanish: (conversationally) fluent  
German: Basic

CONFERENCES ORGANIZED:

- ★ YMC\*A 2019, University of Copenhagen, Denmark.
- ★ Rigidity of  $C^*$ -algebras associated to dynamics, 2017, University of Copenhagen, Denmark.
- ★ YMC\*A 2017, University of Copenhagen, Denmark.
- ★ Danske Unge  $C^*$ -algebraikers Symposium (DUC\*S), 2017, University of Aarhus, Denmark.

TEACHING AND SUPERVISION:

As a Ph.D student at the University of Copenhagen:

- 2018: — Functional Analysis, University of Copenhagen, (exercises and occasional lectures).
- DOK (Differential equations and optimal control), Copenhagen Business School, (exercises).
- 2017: — Supervision of master's project (30 ECTS) entitled *An application of symbolic dynamics: Diagonal-preserving gauge-invariant isomorphisms of graph  $C^*$ -algebras* (with Professor Søren Eilers)
- Supervision of graduate project (15 ECTS) entitled *An application of symbolic dynamics — classifying simple Cuntz-Krieger algebras by means of flow equivalence of graphs* (with Professor Søren Eilers)
- DOK (Differential equations and optimal control), Copenhagen Business School, (exercises)
- 2016: — Introduction to numerical analysis, University of Copenhagen, (exercises)

As a student at the University of Copenhagen, I worked as a Teacher's Assistant in charge of exercise sessions in several courses including

- Introduction to Mathematics
- Linear Algebra
- Discrete mathematics
- Analysis 0, 1 and 2
- Measure and integration theory
- Mathematics for biologists and
- Philosophy of science.

MISCELLANEOUS:

From January 2017 to January 2019, I have been the Ph.D and Postdoc representative in the Local Collaboration Committee (lokal samarbejdsudvalg) at the Department of Mathematical Sciences at the University of Copenhagen.

In March 2018, I passed a 3 ECTS course entitled *Introduction to university pedagogy* and in September 2017, I passed a 1 ECTS course entitled *Responsible conduct of research*, both at the University of Copenhagen.