# CURRICULUM VITAE OF KEVIN AGUYAR BRIX

# PERSONAL INFORMATION:

ORCID: https://orcid.org/0000-0003-1237-6446

Email: kabrix.math@fastmail.com

Website: https://kevinaguyarbrix.github.io Address: School of Mathematics and Statistics,

University of Glasgow,

University Place,

Glasgow G12 8QQ, United Kingdom

## **EMPLOYMENT AND AFFILIATION:**

Mar 2022 – present: *Postdoc*, University of Glasgow, United Kingdom

Funded by Independent Research Fund Denmark;

Mar 2021 – Feb 2022: *Postdoc*, University of Glasgow, United Kingdom

Funded by a Carlsberg Foundation Internationalisation Fellowship;

Feb 2020 - Feb 2021: Postdoc, University of Wollongong, Australia

Funded by a Carlsberg Foundation Internationalisation Fellowship;

Sep 2019 – Jan 2020: External lecturer, University of Copenhagen, Denmark

Temporary teaching position.

#### **EDUCATION:**

Sep 2019: Doctor of philosophy in Mathematics, University of Copenhagen

Title: Topological dynamics, groupoids and  $C^*$ -algebras,

Supervisor: Professor Søren Eilers;

May 2016: Master of Science in Mathematics, University of Copenhagen; Feb 2014: Bachelor of Science in Mathematics, University of Copenhagen.

# PUBLICATIONS AND PREPRINT:

Authors are listed alphabetically.

- **K.A. Brix** and Pete Gautam, *On strong shift equivalence for row-finite graphs and C\*-algebras*, (arXiv:2212.05481).
- K.A. Brix, Toke Meier Carlsen and Aidan Sims: Some results regarding the ideal structure of C\*-algebras of étale groupoids, (arXiv:2211.06126).
- K.A. Brix: Sturmian subshifts and their  $C^*$ -algebras, Journal of Operator Theory, to appear.

- B. Armstrong, K.A. Brix, T.M. Carlsen, and S. Eilers: Conjugacy of local homeomorphisms via groupoids and C\*-algebras, Ergodic Theory and Dynamical Systems, 1–22, doi:10.1017/etds.2022.50.
- K.A. Brix: Balanced strong shift equivalence, balanced in-split, and eventual conjugacy, Ergodic Theory and Dynamical Systems (2020), doi:10.1017/etds.2020.126.
- K.A. Brix and T.M. Carlsen:  $C^*$ -algebras, groupoids and covers of shift spaces, Transactions of the American Mathematical Society, Series B **7** (2020), 134–185.
- K.A. Brix and E. Scarparo:  $C^*$ -simplicity and representations of topological full groups of groupoids, Journal of Functional Analysis **227** (2019), no. 9, 2981–2996.
- K.A. Brix and T.M. Carlsen: Cuntz-Krieger algebras and one-sided conjugacy of shifts of finite type and their groupoids, Journal of the Australian Mathematical Society 109 (2020), no. 3, 289–298.

## PERSONAL GRANTS:

Mar 2022 - Mar 2024: International postdoctoral grant, Independent Research Fund Denmark,

Hosted by University of Glasgow, United Kingdom (1303000 DKK).

Mar 2021 – Mar 2022: Carlsberg Foundation Internationalisation Fellowship,

Hosted by University of Glasgow, United Kingdom (410727 DKK).

Feb 2020 – Feb 2021: Carlsberg Foundation Internationalisation Fellowship,

Hosted by University of Wollongong, Australia (350000 DKK).

#### **OTHER GRANTS:**

2022	London Mathematical Society (£900),
	Undergraduate Research Bursary (URB-2022-42)
	To support summer research project with student Pete Gautam.
2022	Glasgow Mathematical Journal Trust (£3000)
	To support international workshop in Glasgow, I was the named applicant
	(with Chris Bruce, Xin Li, and Alistair Miller).
2022	Edinburgh Mathematical Society (£1500)
	To support international workshop in Glasgow
	(with Chris Bruce, Xin Li, and Alistair Miller).
2022	London Mathematical Society, Scheme 6 Workshop Grant (£3600)
	To support international workshop in Glasgow
	(with Chris Bruce, Xin Li, and Alistair Miller).

# INVITED TALKS:

2021

Julie Damms Studiefond (5000 DKK).

2023: (scheduled) Algebra, Geometry and  $C^*$ -algebras, ICMS, Edinburgh, Scotland.

Dec 2022: University of Cardiff, Wales.

Nov 2022: Mathematical Sciences Research Centre,

Queen's University Belfast, Northern Ireland.

Oct 2022: Groups and operator algebras seminar,

University of Copenhagen, Denmark.

Jun 2022: Analysis seminar, University of Oxford, England.

May 2022: Operator Algebra and Noncommutative Geometry seminar (virtual),

University of Wollongong, Australia.

May 2022: AMS Sectional Meeting (virtual), United States.

Mar 2022: Aberdeen Algebra Seminar, University of Aberdeen, Scotland.

Mar 2022: Operator Algebra Seminar, University of Southern Denmark, Denmark.

Sep 2021: Seminar, Research Center for Operator Algebras (virtual),

East China Normal University, China.

Sep 2021: New York Noncommutative Geometry Seminar (virtual),

Apr 2021: Operator Algebra and Noncommutative Geometry seminar (virtual),

University of Wollongong, Australia.

Mar 2021: United Kingdom Operator Algebras seminar (virtual), United Kingdom. Feb 2021: Operator Algebras seminar (virtual), Copenhagen/Odense, Denmark. Jun 2020: Abend seminar (virtual), University of Western Sydney, Australia.

Nov 2019: Seminar, Queen Mary University, London, England.

Nov 2019: Oberseminar, WWU Münster, Germany. Oct 2019: Analysis seminar, KU Leuven, Belgium.

Jan 2019: Analysis seminar, University of Glasgow, Scotland.

Dec 2018: Danish Operator Algebra Seminar,

University of Southern Denmark, Denmark.

Jun 2018: Workshop in operator algebras and dynamics,

University of the Faroe Islands, the Faroe Islands.

Feb 2018: Operator Algebra and Noncommutative Geometry seminar,

University of Wollongong, Australia.

Jan 2018: Seminar, University of Western Sydney, Australia.

May 2017: CRM, Universitat Autónoma de Barcelona, Spain.

Sep 2016: PhD seminar, University of Copenhagen, Denmark.

## SERVICE TO THE PROFESSION AND COMMUNITY:

- I am a co-organiser of the Glasgow Analysis Seminar.
- I organised the Operator Algebra and NonCommutative Geometry seminar in 2020 at the University of Wollongong, Australia.
- I write reviews for MathSciNet and I have worked as referee for various journals including *Transaction of the American Mathematical Society, Canadian Journal of Mathematics, Journal of Mathematical Analysis and Applications, Mathematica Scandinavica, Proceedings of the Royal Society of Edinburgh. Section A, and Studia Mathematica.*

- I helped organise the following conferences/workshops:
  - Glasgow Late August Symbolic Dynamics, Groups, and Operators Workshop, August 2022, University of Glasgow;
  - ∘ *Young Mathematicians in C\*-Algebra* (YM*C\**A), 2017 and 2019, University of Copenhagen;
  - Rigidity of C\*-algebras associated to dynamics, 2017, University of Copenhagen;
  - o Danske Unge  $C^*$ -algebraikers Symposium (DU $C^*$ S), 2017, University of Aarhus.
- I helped restart and organise the *What is ... seminar* at the University of Copenhagen (2019).
- I was the Ph.D and Postdoc representative for the Local Collaboration Committee (lokal samarbejdsudvalg, LSU), January 2017 to January 2019, Department of Mathematical Sciences at the University of Copenhagen.

#### **TEACHING EXPERIENCE:**

2023: Functional analysis, lecturer and course responsible

2020: MATH151 (general mathematics), lecturer 2019: Mathematical modeling, (exercises, Maple)

Numerical analysis, (exercises, Python)

2016–2019: Supervision of a Master's project (30 ECTS) and

a Graduate project (15 ECTS) joint with Søren Eilers Functional analysis, (exercises and occasional lectures)

Numerical analysis, (exercises)

Differential equations and control theory, (exercises).

2011–2016: Introduction to Mathematics, (exercises)

Linear algebra, (exercises)

Discrete Mathematics, (exercises)
Analysis 0, 1, and 2, (exercises)
Measure and integration, (exercises)
Mathematics for biologists, (exercises)
Philosophy of science, (exercises).