

CURRICULUM VITAE OF KEVIN AGUYAR BRIX

PERSONAL INFORMATION:

ORCID: <https://orcid.org/0000-0003-1237-6446>
Email: kabrix@imada.sdu.dk
Website: <https://kevinaguyarbrix.github.io>
Address: Department of Mathematics and Computer Science,
University of Southern Denmark,
5230 Odense, Denmark

EMPLOYMENT AND AFFILIATION:

Aug 2024: **Assistant professor**, University of Southern Denmark, Denmark.
Mar 2024 – Aug 2024: **Postdoc**, Lund University, Sweden
Funded by Starting Grant from Swedish Research Council.
Mar 2022 – Mar 2024: **DFF-international Postdoc**, University of Glasgow, United Kingdom
Funded by Independent Research Fund Denmark.
Mar 2021 – Feb 2022: **Carlsberg fellow (Postdoc)**, University of Glasgow, United Kingdom
Funded by a Carlsberg Foundation Internationalisation Fellowship.
Feb 2020 – Feb 2021: **Carlsberg fellow (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.

RESEARCH GRANTS AND FELLOWSHIPS:

2024–2026: **Reintegration Fellowship**, Carlsberg Foundation (1397000 DKK)
University of Southern Denmark, Denmark.
2024: **Starting Grant**, Swedish Research Council, (4000000 SEK),
16 % success rate.
Lund University, Sweden.
(terminated early in favour of my current job).
2024: **Marie Curie** postdoctoral fellowship (214,934.4 EURO)
15.8% success rate, 2.15 % in mathematics.
University of Copenhagen, Denmark.
(declined in favour of my current job).
2022 – 2024: **International postdoc**, Independent Research Fund Denmark,
14% success rate.
University of Glasgow, United Kingdom (1303000 DKK),
2021 – 2022: **Internationalisation Fellowship**, Carlsberg Foundation
University of Glasgow, United Kingdom (410727 DKK).
2020 – 2021: **Internationalisation Fellowship**, Carlsberg Foundation
University of Wollongong, Australia (350000 DKK).

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 (SUBMITTED) PREPRINTS:

Authors are listed alphabetically. Authors with an asterisk * were undergraduate students when paper was written.

- **K. A. Brix**, A. Dor-On, R. Hazrat, and E. Ruiz: *Unital aligned shift equivalence and the graded classification conjecture for Leavitt path algebras*, (arXiv:2409.03950).
- **K. A. Brix**, J. B. Hume, and X. Li: *Minimal covers with continuity-preserving transfer operators for topological dynamical systems*, (arXiv:2408.11917).
- **K. A. Brix**, Chris Bruce, Kang Li, and Eduardo Scarparo: *Maximal ideals in reduced group C^* -algebras and Thompson's groups*, (arXiv:2403.13645).
- **K. A. Brix**, A. Munday, and A. Rennie: *Morphisms of Cuntz–Pimsner algebras from completely positive maps*, Journal of the Australian Mathematical Society (special edition in honour of Iain Raeburn), to appear.
- **K. A. Brix**, C. Bruce, and A. Dor-On: *Normal coactions extend to the C^* -envelope*, (arxiv:2309.04817).
- **K. A. Brix**, A. Munday, and A. Rennie: *Splittings for C^* -correspondences and strong shift equivalence*, *Mathematica Scandinavica* 130 (2024), 101–148.
- **K. A. Brix**, T. M. Carlsen, and A. Sims: *Ideal structure of C^* -algebras of commuting local homeomorphisms*, (arXiv:2303.02313).
- **K. A. Brix**: *Invertible and noninvertible symbolic dynamics and their C^* -algebras*, in: *Advances in Functional Analysis and Operator Theory*, Contemporary Mathematics AMS, Volume: 798 (2024).
- **K. A. Brix** and P. Gautam*: *On strong shift equivalence for row-finite graphs and C^* -algebras*, *Involve, a Journal of Mathematics*, Vol. 17 (2024), No. 2, 293–309.
- **K. A. Brix**, T. M. Carlsen, and A. Sims: *Some results regarding the ideal structure of C^* -algebras of étale groupoids*, *Journal of the London Mathematical Society*, <https://doi.org/10.1112/jlms.12870>, 2024.
- **K. A. Brix**: *Sturmian subshifts and their C^* -algebras*, *Journal of Operator Theory* **90** (2023), 523–544.

- 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 **43** (2023), 2516–2537.
- **K. A. Brix**: *Balanced strong shift equivalence, balanced in-split, and eventual conjugacy*, Ergodic Theory and Dynamical Systems **42** (1), (2020), 19–39
- **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.

SELECTED RESEARCH VISITS:

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|--------------------|--------------------------------------------------------------------------|
| Jun 2024: | Research visit, Florianopolis, Brazil. |
| Mar 2024: | Oberwolfach (<i>Combinatorial C^*-algebras</i>), Germany. |
| Sep–Oct 2023: | Fields institute, Canada. |
| Jun–Jul 2019: | Visiting Aidan Sims, University of Wollongong, Australia. |
| Oct 2018: | Visiting Eduard Ortega, NTNU, Norway. |
| Nov 2017–Feb 2018: | Visiting Aidan Sims, University of Wollongong, Australia. |
| Mar 2017: | CRM, Universitat Autònoma de Barcelona, Spain. |

OTHER GRANTS:

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| 2024: | Visiting professor to Brazil (20000 BRL) |
| 2022 | London Mathematical Society, Scheme 2 (£1500) To support Ruy Exel’s visit to University of Glasgow (with Chris Bruce and Eduardo Scarparo). |
| 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). |
| 2021 | Julie Damms Studiefond (5000 DKK). |

INVITED TALKS:

- Aug 2024: IWOTA, Kent, England.
Jun 2024: Seminar, UFSC, Florianopolis, Brazil.
Mar 2024: Combinatorial $*$ -algebras, Oberwolfach, Germany.
Feb 2024: Analysis seminar, Newcastle, England.
Feb 2024: Analysis seminar, Glasgow, Scotland.
Jan 2024: Colloquium, Lancaster, England.
Nov 2023: South Atlantic NCG seminar (virtual), Argentina.
Jul 2023: Foundations of Physics 2023, Bristol, England.
Jul 2023: Graph algebras 2023 conference, Bedlewo, Poland.
Jun 2023: Algebra, Geometry and C^* -algebras, ICMS, Edinburgh, Scotland.
May 2023: Seminar, University of Southern Denmark, Denmark.
Apr 2023: Seminar, Lund University, Sweden.
Apr 2023: Analysis and Probability seminar, University of Gothenburg, Sweden.
Dec 2022: GAPT seminar, 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 Aut3noma de Barcelona, Spain.
Sep 2016: PhD seminar, University of Copenhagen, Denmark.

SERVICE TO THE PROFESSION AND COMMUNITY:

- I chaired a career panel during the 2024 YMC*A.
- I have been a co-organiser of the Glasgow Analysis Seminar (2021–2023) and the Operator Algebra and NonCommutative Geometry seminar (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 co-organised the following conferences/workshops:
 - *Glasgow Late August Symbolic Dynamics, Groups, and Operators Workshop*, August 2022, University of Glasgow;
 - *Young Mathematicians in C*-Algebra (YMC*A)*, 2017 and 2019, University of Copenhagen;
 - *Rigidity of C*-algebras associated to dynamics*, 2017, University of Copenhagen;
 - *Danske Unge C*-algebraikers Symposium (DUC*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.