

## CURRICULUM VITAE OF KEVIN AGUYAR BRIX

### PERSONAL INFORMATION:

ORCID: <https://orcid.org/0000-0003-1237-6446>  
Email: [kabrix.math@fastmail.com](mailto:kabrix.math@fastmail.com)  
Website: <https://kevinaguyarbrix.github.io>  
Address: Centre for Mathematical Sciences,  
Lund University,  
Box 118, 221 00 Lund, Sweden

### EMPLOYMENT AND AFFILIATION:

Mar 2024: *VR 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:

2024–2028: **Starting Grant**, Swedish Research Council, (4000000 SEK),  
16 % success rate.  
Lund University, Sweden.  
2024–2026: **Reintegration Fellowship**, Carlsberg Foundation (1397000 DKK)  
University of Southern Denmark, Denmark.  
2025–2027: **Marie Curie** postdoctoral fellowship (214,934.4 EURO)  
15.8% success rate, 2.15 % in mathematics.  
University of Copenhagen, Denmark.  
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. Munday, and A. Rennie: *Morphisms of Cuntz–Pimsner algebras from completely positive maps*, (arXiv:2311.16600).
- **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*, to appear.
- **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*, *Contemporary Mathematics AMS*, to appear.
- **K.A. Brix** and Pete Gautam\*: *On strong shift equivalence for row-finite graphs and  $C^*$ -algebras*, *Involve, a Journal of Mathematics*, to appear. (arXiv:2212.05481).
- **K.A. Brix**, Toke Meier Carlsen, and Aidan 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* (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.

#### SELECTED RESEARCH VISITS:

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|--------------------|---|
| 2024:              | (planned) Research visit, Florianopolis, Brazil.                    |
| Mar 2024:          | (planned) Oberwolfach ( <i>Combinatorial *-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)<br>To support Ruy Exel's visit to University of Glasgow<br>(with Chris Bruce and Eduardo Scarparo).                         |
| 2022  | London Mathematical Society (£900),<br>Undergraduate Research Bursary (URB-2022-42)<br>To support summer research project with student Pete Gautam.                       |
| 2022  | Glasgow Mathematical Journal Trust (£3000)<br>To support international workshop in Glasgow, I was the named applicant<br>(with Chris Bruce, Xin Li, and Alistair Miller). |
| 2022  | Edinburgh Mathematical Society (£1500)<br>To support international workshop in Glasgow<br>(with Chris Bruce, Xin Li, and Alistair Miller).                                |
| 2022  | London Mathematical Society, Scheme 6 Workshop Grant (£3600)<br>To support international workshop in Glasgow<br>(with Chris Bruce, Xin Li, and Alistair Miller).          |
| 2021  | Julie Damms Studiefond (5000 DKK).  |

#### INVITED TALKS:

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|-----------|--|
| 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.   |

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| 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,<br>Queen's University Belfast, Northern Ireland.                 |
| Oct 2022: | Groups and operator algebras seminar,<br>University of Copenhagen, Denmark.                             |
| Jun 2022: | Analysis seminar, University of Oxford, England.  |
| May 2022: | Operator Algebra and Noncommutative Geometry seminar (virtual),<br>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),<br>East China Normal University, China.       |
| Sep 2021: | New York Noncommutative Geometry Seminar (virtual),   |
| Apr 2021: | Operator Algebra and Noncommutative Geometry seminar (virtual),<br>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,<br>University of Southern Denmark, Denmark.                            |
| Jun 2018: | Workshop in operator algebras and dynamics,<br>University of the Faroe Islands, the Faroe Islands.      |
| Feb 2018: | Operator Algebra and Noncommutative Geometry seminar,<br>University of Wollongong, Australia.           |
| Jan 2018: | Seminar, University of Western Sydney, Australia.   |
| May 2017: | CRM, Universitat Autònoma de Barcelona, Spain.  |
| Sep 2016: | PhD seminar, University of Copenhagen, Denmark.   |

#### SERVICE TO THE PROFESSION AND COMMUNITY:

- 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.