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## Uddannelse og Ansættelser

### Positions

- 2015 - present: Associate Professor (Lektor) at University of Southern Denmark  
Head of research section in Analysis since October 2019
- 2013 - 2015: Assistant Professor (Adjunkt) at University of Southern Denmark  
Funded by a Lundbeck Foundation research grant.
- 2012 - 2013: Postdoc at the Katholieke Universitet Leuven (Belgium)
- 2010 - 2011: Postdoc at the Georg-August-Universität Göttingen (Germany).  
Funded by a postdoctoral grant from the Danish Research Council (FNU).
- 2009 (fall): Visiting researcher at the Hausdorff Research Institute for Mathematics,  
Bonn (Germany).
- 2008 - 2009 Postdoc at the Georg-August-Universität Göttingen (Germany).

### Education

- May 2008 PhD in Mathematics from the University of Copenhagen (Denmark)
- Feb. 2005 MSc (Cand.Scient) in Mathematics from the University of Copenhagen (Denmark).

## Priser

### Årets Underviser 2018 (NAT)

Kyed, D. (Modtager), 2018

## Publikationer

### Preprints

- ◆ K. Aguilar . Kaad and D. Kyed, The Podleś spheres converge to the sphere, *Preprint arXiv:2102.12761*
- ◆ K. Aguilar, J. Kaad and D. Kyed, Polynomial approximation of quantum Lipschitz functions, *Preprint 2021*, arXiv: 2104.04317

### Peer reviewed journal publications

- ◆ T. Gottfredsen, J. Kaad and D.Kyed, Gromov-Hausdorff convergence of quantised intervals, *Journal of Mathematical Analysis and Applications* (to appear), arXiv:2007.09694
- ◆ T. Gottfredsen and D. Kyed. Cohomological induction and uniform measure equivalence, *Fundamenta Mathematicae* (to appear) arXiv:1904.03862.
- ◆ J. Koivisto, D. Kyed and S. Raum. Measure equivalence for non-unimodular groups, *Transformation Groups* (to appear) arXiv:1805.09063.
- ◆ J. Kaad and D. Kyed. Dynamics of compact quantum metric spaces, *Ergodic Theory and Dynamical Systems* (to appear), arXiv:1904.13278.
- ◆ J. Koivisto, D. Kyed and S. Raum. Measure equivalence and coarse equivalence for unimodular locally compact groups, *Groups, Geometry and Dynamics* (to appear), arXiv:1703.08121.
- ◆ D. Kyed and H.D. Petersen, Polynomial cohomology and polynomial maps on nilpotent groups, *Glasgow Mathematical Journal* (to appear), arXiv:1503.04068.
- ◆ V. Alekseev and D. Kyed. Uniqueness questions for  $C^*$ -norms on group rings, *Pacific Journal of Mathematics* 298(2), 2019.

- ◆ J. Bichon, D. Kyed and S. Raum, Higher  $L^2$ -Betti numbers of universal quantum groups, *Canadian Mathematical Bulletin* 61(2), 2018.
  - ◆ D. Kyed and S. Raum, On the  $L^2$ -Betti numbers of universal quantum groups, *Mathematische Annalen*, 369(3), 2017.
  - ◆ D. Kyed, Sven Raum, Matthias Valvekens and Stefaan Vaes.  $L^2$ -Betti numbers of rigid  $C^*$ -tensor categories and discrete quantum groups, *Analysis and PDE* 10 (7), 2017.
  - ◆ D. Kyed, Topologizing Lie algebra cohomology, *Differential Geometry and its Applications* 49, 2016.
  - ◆ D. Kyed, Henrik D. Petersen and Stefaan Vaes,  $L^2$ -Betti numbers of locally compact groups and their cross-section equivalence relations, *Transactions of the AMS* 367, 2015.
  - ◆ V. Alekseev and D. Kyed, Measure continuous derivations on von Neumann algebras and applications to  $L^2$ -cohomology, *Journal of Operator Theory* 73 (1), 2015.
  - ◆ D. Kyed and Henrik D. Petersen, A groupoid approach to Lück's amenability conjecture, *Osaka Journal of Mathematics* 51 (4), 2014.
  - ◆ D. Kyed and A. Thom, Applications of Følner's condition to quantum groups, *Journal of Noncommutative Geometry* 7 (2), 2013.
  - ◆ V. Alekseev and D. Kyed, Amenability and vanishing of  $L^2$ -Betti numbers: an operator algebraic approach, *Journal of Functional Analysis*, 263 (4), 2012.
  - ◆ D. Kyed and P. M. Soltan, Property (T) and exotic quantum group norms, *Journal of Noncommutative Geometry* 6 (4), 2012.
  - ◆ D. Kyed, An  $L^2$ -Künneth formula for tracial algebras, *Journal of Operator Theory*, 67 (2), 2012.
  - ◆ D. Kyed, On the zeroth  $L^2$ -homology of compact quantum groups, *Münster Journal of Mathematics*, no. 4, 2011.
  - ◆ D. Kyed, A cohomological description of property (T) for quantum groups, *Journal of Functional Analysis*, 261 (2011).
  - ◆ D. Kyed,  $L^2$ -Betti numbers of coamenable quantum groups, *Münster Journal of Mathematics*, no. 1, 2008.
  - ◆ D. Kyed,  $L^2$ -homology for compact quantum groups, *Mathematica Scandinavica*, 103 (1), 2008.
- Other publications**
- ◆ D. Kyed,  $L^2$ -invariants for quantum groups, PhD thesis. ISBN 978-87-91927-22-5.
  - ◆ D. Kyed, Uniqueness of group-measure space Cartan subalgebras, Notes following Adrian Ioana's IHP lectures, May 2011, Preprint, arXiv:1110.3508.

## Bevillinger

- 2020: Carsberg foundation conference grant (DKK 59.900 = € 8.000)  
*Conference celebrating the scientific contributions of Ryszard Nest*  
Main participants: D. Kyed (PI) and J. Kaad (co-PI)
- 2019-2023: DFF research project 1 (DKK 2,377,440 = € 318,394)  
*Classical and Quantum Distances*  
Main participants: D. Kyed (PI) and J. Kaad (co-PI)
- 2017-2021: DFF research project 2 (DKK 5,497,658 = € 736,031)  
*Automorphisms and Invariants of Operator Algebras*  
Main participants: W. Szymanski (PI), S. Eilers, J. Kaad, D. Kyed, R. Nest, K. Thomsen and S. Thorbjørnsen
- 2015-2018: Villum Foundation Research Grant (DKK 4,596,900 = € 617,493)  
*Local and global structures of groups and their algebras*  
Main participants: W. Szymanski (PI) and D. Kyed (co-PI)
- 2013-2015: Lundbeck Foundation research grant (DKK 1,255,706 = € 168,446)  
*Amenability and Rigidity in non-commutative geometry*  
Main participants: David Kyed (PI)
- 2010-2012: DFF Postdoctoral Grant (DKK 1,238,098 = € 166,056)  
 *$L^2$ -invariants in non-commutative Geometry*

Main participants: David Kyed (PI)

## **Foredrag og konference-organisering**

- Around 50 invited research talks at conferences, workshops and other research institutions
- 10 invited survey talks for broader mathematical audiences and outreach lectures for non-experts.

### **Conferences organized**

1. *Ryszard Nest's retirement conference*, spring 2021.
2. *Automorphisms and Invariants of Operator Algebras*, October 2021
3. *Operator Algebras and NCG*, Special session at the NCM, August 2021
4. *Workshop on the Thompson groups*, August 2016

## **Yderligere information**

Se <http://www.imada.sdu.dk/~dkyed> for mere information