

# ROSANNA LAKING

## PERSONAL INFORMATION

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DATE OF BIRTH: 28 February 1989  
NATIONALITY: British  
WORK ADDRESS: Università di Verona, Strada le Grazie 15, 37134 Verona, Italy  
EMAIL: [rosanna.laking@univr.it](mailto:rosanna.laking@univr.it)  
LANGUAGES: English (native), Italian

## EMPLOYMENT HISTORY

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DEC 2021 Tenure-track Lecturer (RtdB), **University of Verona**, Verona, Italy.  
- PRESENT

APR 2021 Postdoctoral Researcher, **University of Verona**, Italy.  
- DEC 2021 Mentor: Prof. Lidia ANGELERI HÜGEL

JAN 2021 Marie Skłodowska-Curie Fellow, **University of Verona**, Italy.  
- MAR 2021 Mentor: Prof. Lidia ANGELERI HÜGEL

OCT 2020 Research Fellow, **Hausdorff Research Institute for Mathematics**, Germany.  
- DEC 2020 Part of Junior Trimester Program: New Trends in Representation Theory

JAN 2019 Marie Skłodowska-Curie Fellow, **University of Verona**, Italy.  
- SEPT 2020 Mentor: Prof. Lidia ANGELERI HÜGEL

OCT 2017 Postdoctoral Researcher, **Max Planck Institute for Mathematics**, Germany.  
- SEPT 2018 Mentor: Prof. Jan SCHRÖER

OCT 2016 Postdoctoral Researcher, **University of Bonn**, Germany.  
- SEPT 2017 Mentor: Prof. Jan SCHRÖER

JUN 2016 Postdoctoral Researcher, **University of Manchester**, UK.  
- AUG 2016 Mentor: Prof. Mike PREST

## EDUCATION HISTORY

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SEPT 2012 PhD in PURE MATHEMATICS, **University of Manchester**, UK  
- MAY 2016 Thesis title: “String algebras in representation theory” | Advisor: Prof. Mike PREST

SEPT 2008 MSci (1st class) in MATHEMATICS, **University of Bristol**, UK  
- JULY 2012 Project title: “Equivalences of categories” | Advisor: Prof. Jeremy RICKARD

## PUBLISHED PAPERS

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- *Infinite-dimensional representations of algebras.*  
in *Modern Trends in Algebra and Representation Theory.*  
*Cambridge University Press*, LMS Lecture Note Series, Number 486, 146–168 (2023).
- *Cosilting modules over cluster-tilted algebras of type  $\tilde{A}$*  (with K. BAUR).  
*Journal of Pure and Applied Algebra*, Volume 226, Issue 10 (2022).
- *Cotilting sheaves over weighted noncommutative regular projective curves* (with D. KUSSIN).  
*Documenta Mathematica*, Volume 25, 1029–1077 (2020).
- *Definability and approximations in triangulated categories* (with J. VITÓRIA).  
*Pacific Journal of Mathematics*, Volume 306, 557–586 (2020).
- *Purity in compactly generated derivators and  $t$ -structures with Grothendieck hearts.*  
*Mathematische Zeitschrift*, Volume 295, 1615–1641 (2020).
- *Krull-Gabriel dimension and the Ziegler spectrum.*  
in *Proceedings of the 17th Workshop and International Conference on Representations of Algebras.*

*American Mathematical Society*, Contemporary Mathematics Series, Volume 705, 115–130 (2018).

- *Krull-Gabriel dimension of a domestic string algebra* (with M. PREST and G. PUNINSKI). *Transactions of the American Mathematical Society*, Volume 370, 4813–4840 (2018).
- *The Ziegler spectrum for derived-discrete algebras* (with K.K. ARNESEN, D. PAUKSZTELLO and M. PREST). *Advances in Mathematics*, Volume 319, 653–698 (2017).
- *Morphisms between indecomposable complexes in the bounded derived category of a gentle algebra* (with K.K. ARNESEN and D. PAUKSZTELLO). *Journal of Algebra*, Volume 467, 1–46 (2016).

## PREPRINTS AND PAPERS IN PREPARATION

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- *Bricks and mutation* for the proceedings of the 20th Workshop and International Conference on Representations of Algebras published by the European Mathematical Society in the *EMS series of congress reports*. In preparation.
- *Mutation of torsion pairs for finite-dimensional algebras* (with L. ANGELERI HÜGEL and F. SENTIERI). In preparation.
- *Simples in a cotilting heart* (with L. ANGELERI HÜGEL and I. HERZOG). Preprint arXiv:2205.11883, 2022.
- *Mutation and torsion pairs* (with L. ANGELERI HÜGEL, J. STOVICEK and J. VITÓRIA). Preprint arXiv:2201.02147, 2022.

## PRIZES AND OTHER DISTINCTIONS

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- JAN 2023 Abilitazione Scientifica Nazionale  
*Professore universitario di Seconda Fascia 01/A2 - GEOMETRIA E ALGEBRA*
- OCT 2022 Fellowship to attend Trimester Programme - Hausdorff Institute, Bonn
- NOV 2022 *Research program "Spectral Methods in Algebra, Geometry and Topology"*
- AUG 2022 International Conferences on Representations of Algebras (ICRA) Award  
*Awarded by scientific committee of the ICRA for outstanding work by young mathematicians in the field of Representations of Finite-Dimensional Algebras*
- OCT 2020 Fellowship to attend Junior Trimester Programme - Hausdorff Institute, Bonn
- DEC 2020 *Research program "New Trends in Representation Theory"*
- JAN 2019 Marie Skłodowska-Curie Individual Fellowship
- MAR 2021 *Two year research fellowship*

## MEMBERSHIP OF PROJECTS

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- OCT 2023 Member of PRIN (SQUARE)
- SEP 2025 *Project on Structures for Quivers, Algebras and Representations (SQUARE)*
- MAR 2021 Member of the Network on Silting
- FEB 2024 *Network of 18 researchers funded by the the Deutsche Forschungsgemeinschaft*
- JAN 2020 External member of the REDCOM project
- DEC 2022 *Project funded by the Fondazione Cariverona*

## MAIN SPEAKER AT CONFERENCES, MEETINGS AND WORKSHOPS

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- DEC 2023 **Representation Theory and Non-Commutative Geometry / ARTIG 3**,  
*Paderborn, Germany (invited speaker, delivered online)*  
Title: "Extending the brick/ $\tau$ -rigid correspondence"
- SEPT 2023 **Silting in Representation Theory, Singularities, and Noncommutative Geometry**,  
*CMO-BIRS, Casa Matemática Oaxaca, Mexico (invited participant and selected speaker)*  
Title: "Simple tilts and mutation"
- MAR 2023 **Combinatorial aspects of representation theory**,

- Norwegian Academy of Sciences and Letters, Oslo, Norway (invited speaker)*  
Title: “Mutation of cosilting sets”
- FEB 2023 **Representation Theory of Quivers and Finite Dimensional Algebras,**  
*Mathematisches Forschungsinstitut Oberwolfach, Germany (selected plenary)*  
Title: “Mutation of closed sets of the Ziegler spectrum”
- OCT 2022 **A Path in Algebra,**  
*Padova, Italy (invited speaker)*  
Title: “Simple objects in the heart”
- SEPT 2022 **Representation Theory and Triangulated Categories,**  
*Paderborn, Germany (invited speaker)*  
Title: “Injective-like objects in triangulated categories”
- SEPT 2022 **Silting Theory, Algebras and Representations,**  
*Prague, Czech Republic (invited speaker)*  
Title: “Mutation and the Ziegler Spectrum”
- AUG 2022 **20th International Conference on Representations of Algebras,**  
*Montevideo, Uruguay (invited workshop speaker)*  
Title: “Torsion pairs and mutation” (series of three talks)
- JAN 2022 **Flash Talks in Representation Theory,**  
*NTNU, Norway (invited speaker)*  
Title: “Simple objects in the heart and their injective envelopes”
- OCT 2021 **Homological Methods in Representation Theory,**  
*Fraueninsel, Germany (invited speaker)*  
Title: “Mutation in large silting theory”
- SEPT 2021 **Celebration of the work of of Bill Crawley-Boevey (online)**  
*University of Manchester, UK (invited speaker)*  
Title: “Mutation in large silting theory”
- JAN 2020 **Representation Theory of Quivers and Finite Dimensional Algebras,**  
*Mathematisches Forschungsinstitut Oberwolfach, Germany (selected plenary)*  
Title: “Torsion pairs for cluster-tilted algebras of type  $\tilde{A}$ ”
- SEPT 2019 **Representation Theory in Bielefeld - Past and Future,**  
*University of Bielefeld, Germany (invited speaker)*  
Title: “Infinite-dimensional representations over finite-dimensional algebras”
- JUN 2019 **Conference: Interactions between Representation Theory, Algebraic Topology  
and Commutative Algebra (IRTACA) follow up,**  
*Centre de Recerca Matemàtica, Spain (invited speaker)*  
Title: “Definability and t-structures in triangulated categories”
- APR 2019 **Isfahan Conference on Representations of Algebras,**  
*University of Isfahan, Iran (invited speaker)*  
Title: “Cosilting modules over cluster-tilted algebras”
- AUG 2018 **18th International Conference on Representations of Algebras,**  
*Prague, Czech Republic (selected plenary)*  
Title: “Finiteness conditions on the heart of a t-structure”
- APR 2018 **Conference in Memory of Gena Puninski,**  
*University of Manchester, UK (invited speaker)*  
Title: “Purity in compactly generated derivators”
- APR 2018 **Discrete Categories in Representation Theory,**  
*University of Bielefeld, Germany (invited speaker)*  
Title: “Discrete categories and indecomposable objects”
- AUG 2016 **17th International Conference on Representations of Algebras,**  
*University of Syracuse, USA (selected plenary)*  
Title: “Indecomposable objects in the homotopy category of a derived-discrete algebra”

## CONTRIBUTED TALKS AT CONFERENCES, MEETINGS AND WORKSHOPS

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- AUG 2019 **Two weeks of silting theory**,  
*University of Stuttgart, Germany*  
Title: “Cosilting modules over cluster-tilted algebras of type  $\tilde{A}$ ”
- AUG 2017 **Workshop on the Model Theory of Modules, Algebras and Categories**,  
Ettore Majorana Centre for Scientific Culture, Erice, Italy  
Title: “Locally coherent hearts and elementary cogenerators”
- JUN 2016 **Young Women in Representation Theory**,  
*University of Bonn, Germany*  
Title: “The Krull-Gabriel dimension of a category”
- JUN 2015 **Workshop on Cluster Algebras and Finite-dimensional Algebras**,  
*University of Leicester, UK*  
Title: “Transfinite powers of the radical and the Ziegler spectrum”
- OCT 2014 **Workshop on Cluster Algebras and Preprojective algebras**,  
University of Cardiff, UK  
Title: “Morphisms in  $\mathcal{K}^b(\text{proj}\Lambda)$  for  $\Lambda$  a gentle algebra”
- AUG 2014 **16th International Conference on Representations of Algebras**,  
*Tsinghua Sanya International Mathematics Forum, China*  
Title: “Morphisms in  $\mathcal{K}^b(\text{proj}\Lambda)$  for  $\Lambda$  a gentle algebra”

## OTHER INVITED SEMINARS

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- OCT/NOV 2023 **Aarhus Homological Algebra Symposium**,  
*Aarhus University, Denmark*  
Title: “Cosilting sets and the Ziegler spectrum”
- JUN 2023 **Algebra and Representation Theory Seminar**,  
*Roma Tor Vergata, Italy*  
Title: “Cosilting complexes and asymptotic triangulations of the annulus”
- NOV 2022 **Seminar series at Hausdorff Trimester Program**,  
*Spectral Methods in Algebra, Geometry and Topology, HIM Bonn, Germany*  
Title: “Grothendieck hearts in the derived category of a finite-dimensional algebra”
- NOV 2021 **Representation Theory of Algebras and Applications (Brazil)**, online  
Title: “Wide intervals and mutation”
- NOV 2021 **Africa math seminar**, online  
Title: “Wide intervals and mutation”
- OCT 2021 **Seminar Alexander Zavadskij on Representation of Algebras (Columbia)**, online  
Title: “Wide intervals and mutation”
- MAR 2021 **NTNU algebra seminar**, online  
Title: “Mutation and minimal inclusions of torsion classes”
- MAR 2021 **Aarhus algebra seminar**, online  
Title: “Mutation and minimal inclusions of torsion classes”
- DEC 2020 **Bristol algebra seminar**, online  
Title: “Mutation of large cosilting complexes”
- DEC 2020 **Northeastern representation theory seminar**, online  
Title: “Mutation of large cosilting complexes”
- JUN 2020 **MALGA seminar**, online  
Title: “Minimal inclusions of torsion classes and cosilting mutation”
- APR 2019 **Pure Maths Colloquium**,  
*University of St Andrews, UK*  
Title: “Cosilting modules over cluster-tilted algebras”

- MARCH 2019 **MALGA seminar**,  
*University of Verona, Italy*  
Title: “Definability and approximation theory in triangulated categories”
- DEC 2017 **Bristol Algebra Seminar**,  
*University of Bristol, UK*  
Title: “Derived equivalences arising from cotilting modules and finiteness conditions”
- MAY 2017 **Oberseminar Algebra**,  
*University of Stuttgart, Germany*  
Title: “Functor categories and techniques for classifying indecomposable objects”
- MAR 2017 **BLOC Meeting**,  
*City University London, UK (invited speaker)*  
Title: “Indecomposable objects in the homotopy category of derived-discrete algebras”
- FEB 2017 **MALGA Seminar**,  
*University of Verona, Italy*  
Title: “Classification of indecomposable modules via categories of functors”
- NOV 2016 **Oberseminar Darstellungstheorie**,  
*University of Bonn, Germany*  
Title: “Krull-Gabriel dimension for string algebras”
- NOV 2016 **BIREP Seminar**,  
*University of Bielefeld, Germany*  
Title: “Krull-Gabriel dimension, Ziegler spectra of module categories and applications to compactly generated triangulated categories”
- JAN 2016 **Algebra and Number Theory Seminar**,  
*University of Graz, Austria*  
Title: “The Krull-Gabriel dimension of a category”
- APR 2016 **47th meeting of the ARTIN network**,  
*University of Glasgow, UK (invited speaker)*  
Title: “The Ziegler spectrum of a derived-discrete algebra.”
- DEC 2015 **Lancashire Yorkshire Model Theory Seminar**,  
*University of Central Lancashire, UK*  
Title: “Morphisms between pointed modules and pp formulas”
- JUN 2015 **Oberseminar Darstellungstheorie**,  
*University of Bonn, Germany*  
Title: “Morphisms in the bounded derived category of a gentle algebra”
- DEC 2014 **Leicester Pure Mathematics Seminar**,  
*University of Leicester, UK*  
Title: “Morphisms in  $\mathcal{K}^b(\text{proj}\Lambda)$  for  $\Lambda$  a gentle algebra”
- NOV 2014 **Leeds Algebra Seminar**,  
*University of Leeds, UK*  
Title: “Morphisms in the bounded derived category of a gentle algebra”

## TEACHING EXPERIENCE

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- MAR 2023 **Algebraic Geometry**, University of Verona, Italy  
- JUN 2023 *Lectures and exercise classes for Masters students (6 CFU)*
- MAR 2023 **Algebra lineare**, University of Verona, Italy  
- JUN 2023 *Lectures for first year computer science undergraduate students (6 CFU)*
- NOV 2022 **Torsion pairs in abelian categories**, University of Padova, Italy  
-FEB 2023 *Reading course in PhD program, joint with J. Vitória (24 hours)*
- MAR 2022 **Algebra**, University of Verona, Italy  
-JUN 2022 *Leading tutorials and setting exercises for second year undergraduate students*
- MAR 2022 **Algebraic Geometry**, University of Verona, Italy  
- JUN 2022 *Lectures and exercise classes for Masters students (4 CFU)*

- MAR 2022 **Algebra lineare**, University of Verona, Italy  
 - JUN 2022 *Lectures for first year computer science undergraduate students (6 CFU)*
- APR 2021 **Representation theory**, University of Verona, Italy  
 - JUN 2021 *Lectures for Masters students (3 CFU)*
- OCT 2020 **London Mathematical Society Autumn Algebra School**, online  
*Three online lectures for new PhD students at UK universities*
- MAR 2020 **Algebraic Geometry**, University of Verona, Italy (online)  
 -JUN 2020 *Leading tutorials and setting exercises for Masters students*
- MAR 2019 **Representation Theory**, University of Verona, Italy  
 -JUN 2019 *Leading tutorials and setting exercises for Masters students*
- JAN 2019 **Lectures on Purity in Triangulated Categories**, University of Verona, Italy  
*Short lecture series for graduate students*
- OCT 2015 **Foundation year mathematics (ON1)**, University of Manchester, UK  
 -JAN 2016 *Leading tutorials for groups of 30–40 students introducing basic pure mathematics*
- JUL 2015 **MSc Writing Clinic**, University of Manchester, UK  
 -SEPT 2015 *One-to-one tutoring MSc students to improve their mathematical writing skills*
- OCT 2014 **Foundation year mathematics (OB1)**, University of Manchester, UK  
 -JAN 2015 *Leading tutorials for groups of 30–40 students introducing basic pure mathematics*
- FEB 2014 **Linear algebra**, University of Manchester, UK  
 -JUN 2014 *Leading tutorials for groups of 8–10 undergraduate students in concurrence with lectures*
- FEB 2013 **Propositional logic**, University of Manchester, UK  
 -JUN 2013 *Assisting the lecturer in exercise classes for groups of 30–40 undergraduate students*

## STUDENT SUPERVISION

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- DEC 2023 **Viola Conte**, University of Padova, Italy  
 -PRESENT *Masters Thesis*

## ORGANISATION OF CONFERENCES AND SEMINARS

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- MAY 2020 **FD seminar**  
 -PRESENT *Weekly online seminar with international audience of around 30–70 participants*
- NOV 2020 **19th International Conference on Representations of Algebras**  
*Online international conference with 770 registered participants*
- NOV 2019 **Reading Seminar on  $\infty$ -Categories**  
 -FEB 2020 *University of Verona, Italy*
- JAN 2016 **British Postgraduate Model Theory Conference**  
*University of Manchester, UK*
- SEPT 2015 **Infinite-dimensional Representations of Finite-dimensional Algebras**  
*University of Manchester, UK*

## RESEARCH VISITS

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- OCT/NOV 2021 Aarhus University, Denmark (1 week)  
*Hosts: Dr. Amit Shah and Dr. Raphael Bennett-Tennenhaus.*
- SEP 2021 University of Stuttgart, Germany (1 week)  
*Host: Dr. Alexandra Zvonareva.*
- JAN 2016 University of Graz, Austria (1 week + 1 week)  
 AND FEB 2019 *Host: Prof. Karin Baur.*
- JAN 2017 University of Verona, Italy (1 month)  
 -FEB 2017 *Host: Prof. Lidia Angeleri Hügel.*
- JUN 2014 NTNU, Trondheim, Norway (1 week)  
*Host: Kristin Krogh Arnesen.*

## OUTREACH AND OTHER RESPONSIBILITIES

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- NOV 2022 **Member of editorial board of the London Mathematical Society newsletter**  
-PRESENT *Commissioning of features articles and other editorial duties*
- MAY 2020 **MSCA-IF webinar**, University of Verona (online)  
*Short presentation at careers event, speaking about my experience as a MSCA Fellow*
- JUL 2015 **Athena Swan Committee member**, University of Manchester, UK  
-AUG 2016 *Student representative on committee promoting the advancement of gender equality*
- JUL 2015 **Making Maths at Manchester**, University of Manchester, UK  
*Outreach event for school students in their final year of study*
- SEPT 2011 **Maths Café tutor**, University of Bristol, UK  
*Informal drop-in sessions for second year students to accompany formal lecture courses*