

Curriculum Vitae

Michal Hrbek

Date of birth: December 4, 1988, Prague, Czech Republic

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Research interests

Homological algebra, commutative algebra, algebraic geometry, representation theory.

Professional experience

2023 - Research Fellow, Institute of Mathematics, Czech Academy of Sciences

2017 - 2023 Postdoc, Institute of Mathematics, Czech Academy of Sciences

2012 - 2017 Teaching Assistant, Department of Algebra, Charles University

Practical classes taught: Algebra, Linear Algebra and Geometry, Number Theory and RSA, Representations of Finite-dimensional Algebras.

Education

2013 - 2017 Ph.D., Faculty of Mathematics and Physics, Charles University

Thesis topic: Tilting theory of commutative rings; Advisor: Jan Trlifaj

2011 - 2013 MSc. (hons.), Faculty of Mathematics and Physics, Charles University

2008 - 2011 BSc., Faculty of Mathematics and Physics, Charles University

Awards

2022 The Czech Mathematical Society Prize for Young Researchers

2020 Otto Wichterle Award of the Czech Academy of Sciences

2013 Dean prize for best master thesis in Mathematics, Faculty of Mathematics and Physics, Charles University

Research visits

12/2018 Research visit at University of Padova.

11/2018 Research visit at University of Stuttgart.

10/2018 Research visit at University of Verona.

01 - 08/2018 Research stay at University of Padova.

09/2015 Research visit at University of Verona.

02/2015 Research programme IRTATCA CRM in Barcelona.

Community service

Refereed for journals including International Mathematical Research Notices, Transactions of the American Mathematical Society, Mathematische Zeitschrift, and Publicacions Matemàtiques.

Associate editor in Kyungpook Mathematical Journal.

Co-organized conferences including Workshop and 18th International Conference on Representations of Algebras (ICRA 2018) in Prague and Tilting Theory, Algebras and Representations (STAR 2022) in Prague.

Project participation

- **01/2023** - Project no. 23-05148S, Homological and structural theory in geometric contexts, Czech Science Foundation, role: team member.
- **05/2021** - Member of the Network on Silting Theory, a research network funded by the Deutsche Forschungsgemeinschaft.
- **01/2020** - Project no. 20-13778S, Symmetries, dualities and approximations in derived algebraic geometry and representation theory, Czech Science Foundation, role: team member.
- **01/2018 - 12/2018** Project no. MSM1001918011, Structure and localizations of the derived category of a commutative ring, Czech Academy of Sciences Programme for research and mobility support of starting researchers, role: main investigator.
- **01/2017 - 07/2017** Project no. 17-23112S: Structural representation theory of algebras (localization and tilting theory), Czech Science Foundation, role: team member.
- **01/2014 - 12/2016** Project no. 14-15479S: Representation theory (structural decompositions and their constraints), Czech Science Foundation, role: team member.

Students

- Tomáš Lysoněk, Master's Thesis at Faculty of Mathematics and Physics of the Charles University, *Local properties of modules*, defended 2022.

Selected conference talks

06/2012 *Modules with a minimal generating set*, AAA84, TU Dresden, Germany.

06/2014 *Some notes on Saorín's problem*, ASTA 2014, Spineto, Italy.

07/2015 *One dimensional tilting modules and classes over commutative rings*, Homological algebra in Kentucky, Lexington, USA.

05/2016 *Silting Modules over Commutative Rings*, Maurice Auslander Distinguished Lectures and International Conference, Woods Hole, USA.

08/2016 *n-tilting classes over commutative rings*, ICRA 2016, Syracuse, USA.

08/2018 *On t-structures in the derived category of a commutative ring*, International Conference on Representations of Algebras 2018, Prague.

08/2019 (invited) *Homotopically smashing t-structures over commutative noetherian rings*, Two weeks of silting. Stuttgart, Germany.

10/2021 (invited) *Derived equivalences induced by codimension functions on $\text{Spec}(R)$* , Homological Methods in Representation Theory, Chiemsee, Germany.

Research seminar talks

2018 - 3 talks (2 of them online) within Oberseminare am IAZ Algebra - Darstellungstheorie - Homologische Methoden, University of Stuttgart.

2020 An online talk within "Hausdorff Junior Trimester Program on New trends in representation theory", University of Stuttgart.

2018 - 3 talks (1 of them online) within MALGA seminar, Universities of Padova and Verona.

2013 - 13 talks within Algebra seminar, Department of Algebra, Charles University in Prague.