# Francesco Genovese

Curriculum Vitae

Univerzita Karlova, Katedra algebry Sokolovská 49/83, 186 75 Praha 8 Czech Republic ⊠ genovese@karlin.mff.cuni.cz



### Personal data

Citizenship Italian

### **Positions**

September 2021 -Postdoc at Charles University in Prague, supervisor doc. RNDr. Jan present Šťovíček

May 2019 - July Postdoc at University of Antwerp, supervisor Prof. Wendy Lowen 2021

May 2017 - April Postdoc at University of Hasselt, supervisor Prof. Michel Van den Bergh 2019

September 2016 -Postdoc at the Mathematical Institute of the University of Bonn. April 2017

## Education

November 2012 - Ph.D. in Mathematics, University of Pavia, Mark: Ottimo.

December 2015 Thesis: Quasi-functors as lifts of Fourier-Mukai functors: the uniqueness problem, advisor Prof. Alberto Canonaco. Thesis defended on 1 December 2015.

Laurea Magistrale (M.Sc.) in Mathematics, University of Pavia, October 2009 -

April 2012 Mark: 110/110 cum laude.

> Thesis: Dg-enhancements of triangulated categories and the uniqueness problem of dg-lifts, advisor Prof. Alberto Canonaco. Thesis defended on 17 April

October 2006 - Laurea Triennale (B.Sc.) in Mathematics, University of Pavia, Mark: February 2010 110/110 cum laude.

> Thesis: Il problema delle estensioni e la coomologia dei gruppi, advisor Prof. Ludovico Pernazza. Thesis defended on 18 February 2010.

Student at Istituto Universitario di Studi Superiori, Pavia. October 2006 -

December 2009

Member of Collegio Fratelli Cairoli, Pavia. October 2006 -July 2016

### Research interests

Homological algebra, category theory and their applications to (non-commutative) algebraic geometry. In particular, triangulated categories and their enhancements: dg-categories,  $A_{\infty}$ -categories; t-structures; deformations of triangulated categories, derived categories of algebraic varieties. Fourier-Mukai functors.

## Publications and preprints

- 2022 T-structures on unbounded twisted complexes. Preprint arXiv:2206.12724 [math.CT], 2022
- 2022 A derived Gabriel-Popescu theorem for t-structures via derived injectives, joint with Julia Ramos González. *International Mathematics Research Notices*, 2022
- T-structures and twisted complexes on derived injectives, joint with Wendy Lowen and Michel Van den Bergh. *Adv. Math.*, **387**:Paper No. 107826, 70, 2021.
- 2017 Adjunctions of quasi-functors between dg-categories, *Applied Categorical Structures* **25** (2017), no. 4, 625–657
- 2016 The uniqueness problem of dg-lifts and Fourier-Mukai kernels, *J. Lond. Math. Soc.* (2) **94** (2016), no. 2, 617–638

#### **Talks**

- 27 January 2022 Invited talk *A derived Gabriel-Popescu theorem for t-structures*, FD Seminar
- 20 December 2019 Invited talk *t-structures and twisted complexes on derived injectives*, Department of Mathematics, University of Pavia
- 5 December 2018 Invited talk *t-structures and twisted complexes on derived injectives*, Algebraic Geometry Seminar, University of Liverpool
  - 16 June 2017 Invited talk *Adjunctions of quasi-functors between dg-categories*, Algebra Seminar, University of Antwerp
  - 25 May 2016 Invited talk *II problema dell'unicità dei nuclei di Fourier-Mukai e dei dg-lift*, Giornate di Geometria Algebrica ed Argomenti Correlati XIII, Catania.
  - 17 March 2016 Invited talk *The uniqueness problem of Fourier-Mukai kernels and dglifts*, Algebraic Geometry Seminar, University of Warsaw.
- 22 December 2015 Invited talk *Quasi-functors as lifts of Fourier-Mukai functors: the uniqueness problem,* Seminari di Natale, University of Milan.
  - 15 June 2015 Contributed talk *Dg-lifts and uniqueness of Fourier-Mukai kernels*, 2014-2015 Warwick EPSRC Symposium: Fourier-Mukai, 34 years on.

# Teaching experience

- 2021-2022 Master course Differential graded categories, Charles University, Prague.
- 2020-2021 Exercise sessions for the course *Lineaire Algebra* given by Prof. Dr. Alain Verschoren, Bachelor in Computer Science, University of Antwerp.
- 2019-2020 Exercise sessions for the course *Lineaire Algebra* given by Prof. Dr. Alain Verschoren, Bachelor in Computer Science, University of Antwerp.
- 2014-2015 Teaching seminars for the course *Algebra 2* given by Prof. Paola Frediani, University of Pavia.
- 2013-2014 Teaching seminars for the course *Algebra 2* given by Prof. Maurizio Cornalba, University of Pavia.
- 2012-2013 Teaching seminars for the course *Istituzioni di geometria* given by Prof. Paola Frediani, University of Pavia.
- 2008-2009 Tutoring for the course *Matematica*, Corso di Laurea in Scienze Naturali, University of Pavia.

## Outreach

I participate in the Italian science communication project *Meet Science* on the streaming platform Twitch, where we interview Italian scientists and academics, with the goal of spreading and communicating their activities to the general public.

## Languages

Italian Mothertongue

English Advanced

French Intermediate

Dutch Upper intermediate

German Beginner

Czech Lower intermediate

First Certificate in English, Grade A, 2006 DELF 2nd degré, 2005