

# ALEXEY BESHENOV

☎ (+52) 473 139 4002    🌐 [cadadr.org](http://cadadr.org)    ✉ [alexey.beshenov@cimat.mx](mailto:alexey.beshenov@cimat.mx)

C. Privada San Martín #10, Col. La Venada, 36030, Guanajuato, Gto.

---

## ACADEMIC INTERESTS

Algebraic geometry, number theory.

## EDUCATION

- **2014–2018: University of Bordeaux** (France), **Leiden University** (Netherlands).  
ALGANT DOC Program, European Union scholarship.  
**PhD in mathematics.**  
Thesis “Zeta-values of arithmetic schemes at negative integers and Weil-étale cohomology”, supervised by Baptiste Morin (Bordeaux) and Bas Edixhoven (Leiden).  
Official defense: Leiden, December 10, 2018.  
Referees and examining committee: P. Cassou-Noguès (Université de Bordeaux), Ph. Cassou-Noguès (Université de Bordeaux), D. Holmes (Universiteit Leiden) R. de Jeu (Vrije Universiteit Amsterdam), W. van der Kallen (Universiteit Utrecht), H. Lenstra (Universiteit Leiden), S. Lichtenbaum (Brown University), N. Ramachandran (University of Maryland), P. Stevenhagen (Universiteit Leiden).
- **2012–2014: University of Milan** (Italy), **University of Bordeaux** (France).  
ALGANT Master Program, European Union scholarship.  
**MSc in Mathematics.**  
MSc thesis on algebraic K theory, supervised by Boas Erez (Bordeaux).
- **2010–2012:** University of the Russian Academy of Sciences, St. Petersburg, Department of Mathematics and Computer Science.  
**MSc in theoretical computer science**, diploma cum laude.  
Thesis advisor: Dmitrii Pasechnik.
- **2006–2010:** Lipetsk State University, Russia.  
**BSc in computer science and software engineering**, diploma cum laude.

## POSITIONS

- **October 2019 – November 2020: Centro de Investigación en Matemáticas (CIMAT)**, Guanajuato, Mexico, **visiting researcher**.  
Hosts: Xavier Gómez Mont, Pedro Luis del Ángel.
- **February 2018 – August 2019: University of El Salvador, Natural Sciences Faculty, School of Mathematics, visiting professor**.  
Collaboration with the Ministry of Education of El Salvador, to support the master program in mathematics. Lectures for master and bachelor students, editing of [teaching materials](#), etc.

## TALKS

- **February 2020:** Coloquio Oaxaqueño de Matemáticas, IMUNAM, Oaxaca.
- **December 2019:** First IMSA Conference, IMUNAM/CINVESTAV, Mexico City.
- **November 2019:** Universidad Autónoma de Zacatecas (three talks).
- **October 2019:** XIII Algebra and Topology Workshop, IMUNAM, Cuernavaca.
- **October 2019:** Seminario de geometría algebraica, CIMAT, Guanajuato.
- **May 2019:** Samuel Gitler Conference, CINVESTAV, Mexico City.
- **December 2017:** Algebra, geometry and number theory seminar, Leiden.

## PUBLICATIONS

- Alexey Beshenov, Margaret Bilu, Yuri Bilu, Purusottam Rath, *Rational points on analytic varieties*, EMS Surv. Math. Sci. 2 (2015), no. 1, 109–130.  
<https://doi.org/10.4171/EMSS/10>
- Alexey Beshenov, *Zeta-values of arithmetic schemes at negative integers and Weil-étale cohomology*, PhD thesis, Leiden University, December 2018.  
<https://openaccess.leidenuniv.nl/handle/1887/68224>
- Alexey Beshenov, *Weil-étale cohomology for arbitrary arithmetic schemes and  $n < 0$ . Part I: Construction of Weil-étale complexes*, 2020, preprint (arXiv:2012.11034).  
<https://arxiv.org/abs/2012.11034>
- Alexey Beshenov, *Weil-étale cohomology for arbitrary arithmetic schemes and  $n < 0$ . Part II: The special value conjecture*, in preparation.

## TEACHING EXPERIENCE

### One-semester courses

- **Fall 2020: Algebraic number theory**, Master program in pure mathematics, CIMAT, Guanajuato.
- **Spring 2019: Computational commutative algebra (Gröbner bases)** for master students, University of El Salvador.
- **Spring 2019: Algebra I (rings and groups)** for undergraduate students, University of El Salvador.
- **Spring 2018: Commutative algebra** for master students, University of El Salvador.
- **Fall 2018: Algebra II (rings and fields)** for undergraduate students, University of El Salvador.
- **Spring 2018: Algebra I (groups)** for undergraduate students, University of El Salvador.

### Minicourses

- **Fall 2019: Around arithmetic zeta functions**, CIMAT, Guanajuato.
- **August 2019: Scheme theory** for master students, University of El Salvador.
- **November 2018: Quadratic reciprocity law** for undergraduate students, University of El Salvador.
- **July 2018: Reciprocity laws from Gauss to Artin**, University of El Salvador.
- **June 2018: Category theory** for master students, University of El Salvador.
- **April 2018: p-adic numbers** for master students, University of El Salvador.
- **February 2018: Bernoulli numbers**, University of El Salvador.
- **August–september 2016: Homological algebra**, University of El Salvador.

## LANGUAGES

Russian (native); Spanish, English (fluent); French, Italian (intermediate).

## COMPUTER SKILLS

GNU/Linux, LaTeX, programming, computer algebra systems: PARI/GP, Sage, Macaulay2, GAP4.

## REFERENCES

- [Bas Edixhoven](#) (Leiden University)
- [Matthias Flach](#) (Caltech)
- [Baptiste Morin](#) (Université de Bordeaux)
- [Niranjan Ramachandran](#) (University of Maryland)