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# Marta Pieropan

## Personal

Date of birth: 11 February 1988  
Nationality: Italian

Place of birth: Zevio (VR), Italy

## Education

- 06/2015 **PhD**, *Leibniz Universität Hannover*, Thesis: *Torsors and generalized Cox rings for Manin's conjecture*, Advisor: Prof. Dr. U. Derenthal.
- 07/2012 **Master ALGANT**, *Concordia University - Université Paris-Sud 11 (double degree)*, Thesis: *On the unirationality of Del Pezzo surfaces over an arbitrary field.*, Advisor: Prof. C. Gasbarri.
- 07/2010 **Laurea Triennale in Matematica**, *Università degli Studi di Padova*, Thesis: *Teoremi di Mordell e Lutz-Nagell. Relazioni con due classici problemi aritmetici.*, Advisor: Prof. M. Candilera.

## Employment

- Since 07/2020 Assistant professor (tenured) at Utrecht University, Netherlands.
- 09/2017–06/2020 Post-doc in the Algebraic Geometry group of Z. Patakfalvi at EPFL, Lausanne, Switzerland.
- 09/2015–08/2017 Wissenschaftliche Mitarbeiterin (post-doc) in the Arithmetic Geometry group of H. Esnault at Freie Universität Berlin, Germany.
- 04/2014–08/2015 Wissenschaftliche Mitarbeiterin (PhD student) at Leibniz Universität Hannover, Germany.
- 09/2012–03/2014 Wissenschaftliche Mitarbeiterin (PhD student) at LMU Munich, Germany.

## Research visits

- 2019 (1 month) Trimester program *Reinventing Rational Points*, 15 April – 12 July, 2019, at IHP, Paris, France

## Grants

- 2024 Lorentz Center workshop subsidy, 6.875 Euros + ca. 23.000 Euros in-kind support.
- 2024 Foundation Composition Mathematica workshop subsidy, 3.000 Euros.
- 2024 DIAMANT cluster workshop subsidy, 2.000 Euros.
- 2024 GQT cluster workshop subsidy, 1.500 Euros.
- 2023–2028 NWO VIDI 2021, *Fano varieties: rational points and beyond*, personal grant, 800.000 Euros.

- 2023–2028 NWO Open Competition ENW-XL 2021, *Rational points: new dimensions*, consortium grant (with M. Bright, V. Karemaker, R. van Luijk, S. Müller, C. Salgado), 2.970.529 Euros.
- 2010–2012 Erasmus Mundus scholarship for ALGANT master, 15.000 Euros.
- 2007–2010 INDAM scholarship for undergraduate studies, 12.000 Euros.

## Preprints and publications

11. **Points of bounded height on certain subvarieties of toric varieties**, (with D. Schindler), arXiv:2403.19397.
10. **On rational points on classifying stacks and Malle’s conjecture**, (with S. Akhtari, J. Park, S. Sankar), arXiv:2402.10355.
9. **Campana points on diagonal hypersurfaces**, (with F. Balestrieri, J. Brandes, M. Kaesberg, J. Ortmann, R. Winter), arXiv:2302.08164, Women in numbers Europe IV—research directions in number theory, to appear.
8. **Hyperbola method on toric varieties**, (with D. Schindler), J. Éc. polytech. Math. 11, pp. 107-157, 2024.
7. **On rationally connected varieties over  $C_1$  fields of characteristic 0**, Algebra Number Theory 16, no. 8, pp. 1811–1844, 2022.
6. **Campana points of bounded height on vector group compactifications**, (with A. Smeets, S. Tanimoto and A. Varilly-Alvarado), Proc. Lond. Math. Soc. 123, no. 3, pp. 57–101, 2021.
5. **On Galois descent of complete intersections**, Math. Res. Lett. 28, no. 4, pp. 1243-1254, 2021.
4. **The split torsor method for Manin’s conjecture**, (with U. Derenthal), Trans. Amer. Math. Soc. 373, no. 12, pp. 8485–8524, 2020.
3. **Cox rings over nonclosed fields**, (with U. Derenthal), J. Lond. Math. Soc. 99, no. 2, pp. 447-476, 2019.
2. **O-minimality on twisted universal torsors and Manin’s conjecture over number fields**, (with C. Frei), Ann. Sci. Éc. Norm. Supér. (4) 49, no. 4, pp. 757-811, 2016.
1. **Imaginary quadratic points on toric varieties via universal torsors**, Manuscripta Math. 150, no. 3, pp. 415-439, 2016.

## Conference Reports

**O-minimality and Manin’s conjecture**, Oberwolfach Rep. 14, no. 2, pp. 1366-1368, 2017.

## Invited talks

- 02/2024 Algebra seminar, Groningen, Netherlands.
- 01/2024 New Directions in Rational Points, BIRS Chennai, India.
- 10/2023 ALGANT Alumni Network Symposium, Saint Jacut de La Mer, France.
- 08/2023 Queer In Number Theory and Geometry, Norfolk, UK.
- 06/2023 Oberseminar Zahlentheorie und Arithmetische Geometrie, Hannover, Germany.
- 06/2023 Geometric and Arithmetic Frontiers of Orbifolds II - Arithmetic and hyperbolicity, Strasbourg, France.

- 03/2023 Women in Number Theory 6, BIRS Banff, Canada.
- 03/2023 ANR FRACASSO workshop, Bordeaux, France.
- 11/2022 Arithmetic and Algebraic Geometry Seminar at UvA, Amsterdam, Netherlands.
- 10/2022 Intercity Number Theory Seminar, Leiden, Netherlands.
- 09/2022 O-minimality and Diophantine Geometry, CMI Oxford, UK.
- 06/2022 Séminaire d'Arithmétique et de Géométrie Algébrique, Paris, France.
- 04/2022 Rational points on higher-dimensional varieties, ICMS Edinburgh, UK.
- 04/2022 General Mathematics Colloquium at UvA, Amsterdam, Netherlands.
- 11/2021 Workshop on birational geometry, Moscow, Russia (online).
- 09/2021 Arithmetic Statistics and Local-Global Principles, Vienna, Austria.
- 05/2021 Zoom Algebraic Geometry Seminar (online).
- 04/2021 VaNTAGe Seminar (online).
- 01/2021 GQT Colloquium, Netherlands (online).
- 11/2020 DIAMANT Symposium, Leiden, Netherlands (online).
- 11/2020 Séminaire Théorie des Nombres, Bordeaux, France (online).
- 11/2020 Utrecht Geometry Centre Seminar, Utrecht, Netherlands (online).
- 09/2020 DMV Jahrestagung 2020, Chemnitz, Germany (online).
- 09/2020 Modern Breakthroughs in Diophantine Problems, BIRS Banff, Canada (online).
- 10/2019 Workshop on Birational Geometry, HSE Moscow, Russia.
- 10/2019 Seminar of Geometry at Università Roma Tre, Rome, Italy.
- 09/2019 Topics in Rational and Integral Points, Basel, Switzerland.
- 07/2019 Rational points 2019, Schney, Germany.
- 05/2019 Seminari di Algebra e Geometria Algebrica at Università di Torino, Torino, Italy.
- 02/2019 Higher Dimensional Arithmetic Geometry, Kumamoto, Japan.
- 02/2019 Seminar at KIAS, Seoul, South Korea.
- 02/2019 Seminar at Ajou University, Suwon, South Korea.
- 01/2019 Number Theory Seminar, Grenoble, France.
- 11/2018 Algebraic Geometry and Number Theory Seminar, IST Austria.
- 11/2018 Constructions and obstructions in birational geometry, ICMS Edinburgh, UK.
- 10/2018 Basel–Dijon–EPFL Seminar, Dijon, France.
- 08/2018 Arithmetic and Geometry of cubic hypersurfaces, Hannover, Germany.
- 07/2018 Rational Points on Schiermonnikoog, Schiermonnikoog, Netherlands.
- 05/2018 Rational and Integral Points via Analytic and Geometric Methods, BIRS Oaxaca, Mexico.
- 03/2018 Number Theory Seminar, Utrecht, Netherlands.
- 03/2018 Number Theory Seminar, Basel, Switzerland.
- 10/2017 Seminar of Algebraic Geometry and Number Theory, Lausanne, Switzerland.
- 07/2017 Where Geometry meets Number Theory, Göteborg, Sweden.
- 06/2017 Workshop on O-minimality and Diophantine Applications, Fields Institute, Toronto, Canada.
- 05/2017 Heilbronn Number Theory Seminar, Bristol, UK.

- 05/2017 O-Minimality and its Applications to Number Theory and Analysis, Oberwolfach, Germany.
- 03/2017 Geometry Seminar, Nijmegen, Netherlands.
- 02/2017 Seminar in Algebra, Geometry and Arithmetic, Poznań, Poland.
- 01/2017 NoGAGS, Hamburg, Germany.
- 01/2016 Torsors in Arithmetic and Algebraic Geometry, Nice, France.
- 01/2016 Workshop on Rationality Questions, Bristol, UK.
- 12/2015 Arithmetic Geometry Seminar, FU Berlin, Germany.
- 10/2015 Young Women in Algebraic Geometry, Bonn, Germany.
- 09/2015 5. Jahrestagung DFG-Schwerpunktprogramm 1489, Osnabrück, Germany.
- 06/2015 Rational Points 2015, Schloss Schney, Germany.
- 05/2015 Séminaire "Variétés Rationnelles", Paris, France.
- 02/2015 Intercity Number Theory Seminar, Leiden, Netherlands.
- 02/2015 2. Göttingen-Hannover Number Theory Workshop, Göttingen, Germany.
- 01/2015 Number Theory Seminar, University of Copenhagen, Denmark.
- 07/2014 ENFANT & ELEFANT, Workshop: Analytic Number Theory, Bonn, Germany.
- 07/2014 Oberseminar IAZD, Leibniz Universität Hannover, Germany.
- 03/2014 4. Jahrestagung DFG-Schwerpunktprogramm 1489, Bad Boll, Germany.
- 01/2014 CARP (Collaboration Around Rational Points), Bellairs Research Institute (McGill University), Barbados.
- 09/2013 Summer School in Algorithmic Mathematics, Hamburg, Germany.
- 02/2013 2nd Swiss-French Workshop in Algebraic Geometry, Enney, Switzerland.

### Meetings organization

- 11/2024 *Instructional workshop on rational points* at the University of Groningen, Netherlands. Co-organisers: M. Bright, V. Karemaker, R. van Luijk, S. Müller, C. Salgado.
- 06/2024 *Intercity Number Theory Seminar* at Utrecht University, Netherlands.
- 03/2024 Workshop *Enumerative Geometry and Arithmetic* at the Lorentz Center in Leiden, Netherlands. Co-organizers: T. Browning, F. Carocci, D. Holmes.
- Since Fall 2023 Monthly meetings of the consortium *Rational Points: New Dimensions*. Co-organizers: M. Bright, V. Karemaker, R. van Luijk, S. Müller, C. Salgado.
- 05/2022 *Intercity Number Theory Seminar* at Utrecht University, Netherlands.
- 05/2018 Workshop *Birational Geometry and Arithmetic* at the Institute for Computational and Experimental Research in Mathematics (ICERM), Brown University, Providence, USA. Co-organizers: A. Auel, S. Tanimoto, Y. Tschinkel, A. Várilly-Alvarado.

### Project leadership

- 03/2023 Leader of the project *Campana points of bounded heights on orbifold stacks* at the workshop Women In Number Theory 6 in Banff. Co-leader: J. Park.
- 08/2022 Leader of the project *Campana points and the circle method* at the workshop Women In Numbers Europe - 4 in Utrecht. Co-leader: J. Brandes.

### Research seminars organization

- Since Fall 2023 National coordinator of the Intercity Number Theory Seminar.
- Fall 2023 Reading seminar: Campana points, for the consortium *Rational Points: New Dimensions*.
  - 2022/2023 Algebraic Geometry Seminar, at Utrecht University.
  - 2021/2023 AG Preprint seminar: on recent preprints in the algebraic geometry or number theory sections on arXiv.org, at Utrecht University.
  - Fall 2021 Reading seminar: The circle method, at Utrecht University.
  - 2020/2021 Reading seminar: Logarithmic geometry and Gromov-Witten theory, at Utrecht University.
- Since Fall 2020 Utrecht Geometry Center Seminar, at Utrecht University.
- Fall 2016 Reading seminar: Berkovich spaces, birational geometry and motivic zeta functions, at FU Berlin.

### Postdoc supervision

- Since Fall 2023 Sara Mehidî, at Utrecht University.
- Since Fall 2023 Soumya Sankar, at Utrecht University.
- Since Fall 2022 Remy van Dobben de Bruyn, at Utrecht University, supported by own NWO Veni grant.

### PhD thesis supervision

- Since Fall 2023 Second supervisor of Victor de Vries, at Leiden University.
- Since Fall 2023 Justin Uhlemann, at Utrecht University.
- Since Fall 2021 Boaz Moerman, at Utrecht University.

### Master thesis supervision

- current Luke van de Kraats, at Utrecht University.
- current Michiel van den Eshof, at Utrecht University.
- Spring 2024 Michiel Horix, at Utrecht University.
- Spring 2023 Giacomo Maletto, at University of Turin.
- Fall 2021 Anouk Greven, at Utrecht University.
- Fall 2019 Grégoire Thomazeau, at EPFL.

### Bachelor thesis supervision

- Spring 2024 Wout van der Meer, at Utrecht University.
- Fall 2023 Andrew Mensing, at Utrecht University.
- Spring 2023 Jonathan Grube, at Utrecht University.
- Fall 2022 René Bruin, at Utrecht University.
- Spring 2022 Sofie Kisjes, at Utrecht University.
- Spring 2022 Rishabh Suresh, at University College Utrecht.
- Fall 2021 Matthijs Holstege, at Utrecht University.
- Spring 2021 Mar van Bokhoven, at Utrecht University.

### Supervision of other undergraduate projects

- Fall, 2020–2022 3 times Guiding a group of 4 master students in Orientation in Mathematical Research, at Utrecht University.
- Fall 2018 Hector Pelletier, Master's semester project, at EPFL.
- Fall 2017 Filippo Candia, Bachelor's semester project, at EPFL.

## Teaching experience

### Bachelor courses

- Spring, 2021–2024 4 times Introduction to Algebraic Varieties, at Utrecht University.
- Spring, 2021–2022 2 times Advanced Mathematics, at University College Utrecht.
- Fall 2017 Rings and Modules, at EPFL.
- Fall, 2018–2019 2 times Tutor coordination: Analysis I, at EPFL.
- Fall 2014 Exercise sessions: Algebra 1, at Leibniz Universität Hannover.

### Master courses

- Fall, 2022–2023 2 times Commutative Algebra (joint with D. Holmes), at Utrecht University.
- Fall 2021 Advanced Algebraic Geometry: Topics in Birational Geometry (joint with D. Martinelli), at Utrecht University.
- Spring 2018 Master/PhD seminar supervision: Sheaf Cohomology, at EPFL.
- Spring 2013 Exercise sessions: Algebraic Geometry 2, at LMU Munich.
- Fall, 2012–2013 2 times Exercise sessions: Algebraic Geometry 1, at LMU Munich.

### Minicourses

- Summer 2023 Geometry of Numbers, at the Summer School on Geometry in Utrecht.

### Students tutor

- Since 2020 Tutor for master students in the Algebraic Geometry and Number Theory track at Utrecht University.

## Outreach activities

- 08/2023 Speaker and panelist at Queer In Number Theory and Geometry, Norfolk, UK.
- 06/2023 Invited guest at a lunch discussion on Women in Mathematics, Hannover, Germany.
- 04/2023 Fundamental Connections Campaign Interview, Utrecht, Netherlands.
- 03/2023 Speaker at the EWM-NL event Lead by Example, Utrecht, Netherlands.
- 02/2023 Speaker at the Mathematical Science Experience Day, Utrecht, Netherlands.
- 10/2022 Speaker at the Imaginary exhibition, Utrecht, Netherlands.
- 09/2022 Panelist at the roundtable discussion "Women in Mathematics: present and future", Groningen, Netherlands.
- 04/2022 Speaker at Wiskunde Dagen, Noordwijk, Netherlands.
- 01/2022 Speaker at LGBTQ+ STEMinar 2022, Glasgow, UK (online).
- 11/2021 Local organizer of the *EWM-NL Annual Meeting 2021: The Importance of Networking* at Utrecht University, Netherlands. Co-organizers: P. Salanevich, M. Vlasiou.
- Since 2021 Mentor for the mentor network of EWM-NL.

Since 2020 Local EWM-NL representative at Utrecht University.

## Institutional responsibilities

Since 2024 Chair of the Bachelor theses committee, at Utrecht University.

Since 2024 MI advisory committee, at Utrecht University.

2024 Hiring committee for PhD positions, at Utrecht University.

2023 Graduate School of Natural Sciences Master's Thesis Award Committee, at Utrecht University.

Since 2023 Equality, Diversity & Inclusion Committee Science, at Utrecht University.

2023 Hiring committee for PhD positions, at Utrecht University.

2022 Hiring committee for postdoc positions, at Utrecht University.

Since 2021 Bachelor theses committee, at Utrecht University.

2021 Hiring committee for an Assistant Professor position, at Utrecht University.

2020 - 2022 Department advisory committee, at Utrecht University.

2020 Hiring committee for a PhD position, at Utrecht University.

## Academic services

### Refereeing and Reviewing

Referee or quick opinion for the following journals: Acta Arithmetica, Advances in Mathematics, Annales Scientifiques de l'École Normale Supérieure, Bulletin des Sciences Mathématiques, Duke Mathematical Journal, Compositio Mathematica, European Journal of Mathematics, International Journal of Number Theory, International Mathematics Research Notices, Proceedings of the London Mathematical Society, Transactions of the American Mathematical Society.

Since 2017 Reviewer for Mathematical Reviews (MathSciNet) and zbMATH.

### Thesis committees

27/06/2024 Examiner for the Master's thesis defence of Arjan de Boer at Utrecht University.

17/05/2024 Examiner for the PhD thesis defence of Tim Santens at KU Leuven.

05/03/2024 Examiner for the PhD thesis defence of Daniël van Gent at Leiden University.

05/01/2021 Examiner for the PhD thesis defence of Rosa Winter at Leiden University.

16/07/2020 Examiner for the Master's thesis defence of Tysger Boelens at Utrecht University.

### Other committees

11/2023 Practice job interview committee, at Utrecht University.

06/2023 Practice job interview committee, at Utrecht University.

05/2023 Practice interview committee for NWO Veni grants, at Utrecht University.

12/2022 Assessment committee for NWO Open Competitie - M grants.

## Memberships

Since 2022 European Women in Mathematics

Since 2020 DIAMANT research cluster

Since 2020 GQT research cluster

## █ Courses attended

- 2023/2024 5-day leadership training “Westerdijk programme”, at Utrecht University.
- 2023 7-hour training “Social safety”, at Utrecht University.
- 2023 2-day course “Intercultural competences in education”, at Utrecht University.
- 2023 90-min workshop “How to have a difficult conversation”, at Utrecht University.
- 2022 1-day training “Fire extinguishers”, at Utrecht University.
- 2021 1-day course “Unconscious bias and inclusive recruitment”, at Utrecht University.
- 2021 2-day course “Start to Teach”, at Utrecht University.
- 2021 3-day course “Management Support for Future Leaders”, at Utrecht University.
- 2020 1-hour course “Active bystander”, at Utrecht University.
- 2020 Course “Writing successful grant proposals”, at Utrecht University.

## █ Certificates

- 2023 University Teaching Qualification (UTQ/BKO) at UU.

## █ Languages

- Italian: mother tongue.
- English: fluent.
- Dutch: conversational.
- French: conversational.
- German: conversational.