<div align="center">**Curriculum Vitæ**</div>

Personal Information

Name	**Yonatan Harpaz**.
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Homepage	`https://www.math.univ-paris13.fr/~harpaz/`.

Positions

2017–	**CNRS Researcher**, *Laboratoire Analyse, Géométrie et Applications*, University of Paris 13.
2016-2017	**Postdoctoral Researcher**, *Institut des Hautes Études Scientifiques*.
2014–2016	**Postdoctoral Researcher under FSMP fellowship**, *Département de Mathématiques et Applications*, École Normale Supérieure.
2013–2014	**Postdoctoral Researcher**, *Institute for Mathematics, Astrophysics and Particle Physics*, Radboud University Nijmegen.

Education

2016	**Habilitation à diriger des recherches (HDR)**, University of Paris-Sud.
	Dissertation: *Des relations complémentaires entre homotopie, géométrie et arithmétique*
	Composition of Jury:
	Christian Ausoni
	Tim Browning
	Antoine Chambert-Loir
	Jean-Louis Colliot-Thélène
	Frédéric Déglise
	Vincent Franjou
	David Harari.
2008–2013	**Ph.D., Mathematics**, Einstein Institute of Mathematics, The Hebrew University of Jerusalem, advisor: Prof. Emmanuel Farjoun.
	Dissertation: *Quasi-unital ∞-Categories.*
2005–2008	**M.Sc. Mathematics (with honors)**, The Hebrew University of Jerusalem, advisor: Prof. Emmanuel Farjoun.
	Dissertation: *The Quillen Complex and Equivariant Algebraic Topology.*

Scholarships and financial support

2020	**ERC starting grant**, European Committee.
2019	**Projets Exploratoires Premier Soutien (PEPS)**, CNRS.
2014–2016	**Postdoctoral fellowship**, Fondation Sciences Mathématiques de Paris.
2009	**MIT Visiting Student scholarship**, Department of Mathematics, advisor: Prof. Mark Behrens (two months).
2007	**The Klein Award for Excellent Research Students**, The Hebrew University of Jerusalem.

Supervision

Ph.D

2017–2020	**Truong Hoang Manh**, defended 01/2021.
2018–2022	**Aleksandar Miladinovic**, defended 07/2022.
2018–	**Jules Magois**, *joint supervision with Antoine Chambert-Loir*.
2021–	**Victor Saunier**.

2022– **Jordan Levin**.

2022– **Noé Sotto**, *joint supervision with Lukas Brantner*.

Postdocs

2022- **Guglielmo Nocera**.

2022- **Tasos Moulinos**.

Ran Azouri, to begin spring 2023.

Papers

Submitted

2022 **Rational points on elliptic surfaces and squares represented by products of quadratic forms**.

2022 **Supersolvable descent for rational points**, with Olivier Wittenberg.

2021 *Appendix to:* **Stable Moduli spaces of hermitian forms (F. Hebestreit, W. Steimle)**.

2021 **Hermitian K-theory for stable (∞)-categories IV: Poincaré motives**, with Baptiste Calmès, Emanuele Dotto, Fabian Hebestreit, Markus Land, Kristian Moi, Denis Nardin, Thomas Nikolaus and Wolfgang Steimle.

2021 **Hermitian K-theory for stable (∞)-categories III: Grothendieck-Witt groups of rings**, with Baptiste Calmès, Emanuele Dotto, Fabian Hebestreit, Markus Land, Kristian Moi, Denis Nardin, Thomas Nikolaus and Wolfgang Steimle.

2021 **Hermitian K-theory for stable (∞)-categories II: Cobordism categories and additivity**, with Baptiste Calmès, Emanuele Dotto, Fabian Hebestreit, Markus Land, Kristian Moi, Denis Nardin, Thomas Nikolaus and Wolfgang Steimle.

2021 **Cartesian Fibrations of $(\infty, 2)$-categories** , with Andrea Gagna and Edoardo Lanari.

2020 **Fibrations and lax limits of $(\infty, 2)$-categories**, with Andrea Gagna and Edoardo Lanari.

2020 **On k-invariants for (∞, n)-categories** , with Joost Nuiten and Matan Prasma.

Accepted

2022 **Rational points on fibrations with few non-split fibres**, with Olivier Wittenberg and Dasheng Wei, *Journal für die reine und angewandte Mathematik*, to appear.

2022 **Bilimits are bifinal objects**, with Andrea Gagna and Edoardo Lanari, *Journal of Pure and Applied Algebra*, to appear.

2021 **Hermitian K-theory for stable (∞)-categories I: Foundations**, with Baptiste Calmès, Emanuele Dotto, Fabian Hebestreit, Markus Land, Kristian Moi, Denis Nardin, Thomas Nikolaus and Wolfgang Steimle, *Selecta Mathematica*, to appear.

2020 **On the equivalence of all models for $(\infty, 2)$-categories**, with Andrea Gagna and Edoardo Lanari, *Journal of the London Mathematical Society*, to appear.

2020 **The Massey vanishing conjecture for number fields**, with Olivier Wittenberg, *Duke Mathematical Journal*, to appear.

2020 *Appendix to:* **Number fields with prescribed norms (C. Frei, D. Loughran and R. Newton)**, with Olivier Wittenberg, *Commentarii Mathematici Helvetici*, to appear.

Published

2021 **Gray tensor products and lax functors of $(\infty, 2)$-categories**, with Andrea Gagna and Edoardo Lanari, *Advances in Mathematics*, 391, 2021.

2020 **Zéro-cycles sur les espaces homogènes et problème de Galois inverse**, with Olivier Wittenberg, *Journal of the American Mathematical Society*, 33.3, 2020, p. 775–805.

2020 **Ambidexterity and the universality of finite spans**, *Proceedings of the London Mathematical Society*, 121.5, 2020, p. 1121–1170.

2020 **Lax limits of model categories**, *Theory and Applications of Categories*, 35.25, 2020, p. 959–978.

2019 **Integral points on conic log K3 surfaces**, *Journal of the European Mathematical Society*, 21.3, 2019, p. 627–664.

2019 **Second descent and rational points on Kummer surfaces**, *Proceedings of the London Mathematical Society*, 118.3, 2019, p. 606–648.

2019 **Tangent categories of algebras over operads**, with Joost Nuiten and Matan Prasma, *The Israel Journal of Mathematics*, 234, 2019, p. 691–742.

2019 **Quillen cohomology for $(\infty, 2)$-categories**, with Joost Nuiten and Matan Prasma, *Higher Structures*, 3.1, 2019, p. 17–66.

2019 **The tangent bundle of a model category**, with Joost Nuiten and Matan Prasma, *Theory and Applications of Categories*, 34.33, 2019, p. 1039–1072.

2018 **The cotangent complex and Quillen cohomology of enriched categories**, with Joost Nuiten and Matan Prasma, *Journal of Topology*, 11.3, 2018, p. 752–798.

2017 **Geometry and arithmetic of certain log K3 surfaces**, *Annales de l'Institut Fourier*, 67.5, 2017, p. 2167–2200.

2017 **Pro-categories in homotopy theory**, with Ilan Barnea and Geoffroy Horel, *Algebraic and Geometric Topology*, 17.1, 2017, p. 567–643.

2017 **An integral model structure and truncation theory for coherent group actions**, with Matan Prasma, *Israel Journal of Mathematics*, 221.2, 2017, p. 511–561.

2016 **Hasse principle for Kummer varieties**, with Alexei Skorobogatov, *Algebra and Number Theory*, 10.4, 2016, p. 813-841.

2015 **On the Fibration Method for Zero-Cycles and Rational Points**, with Olivier Wittenberg, *Annals of Mathematics*, 183.1, 2015, p. 229-295.

2015 **The Grothendieck Construction for Model Categories**, with Matan Prasma, *Advances in Mathematics*, 281, 2015, p. 1306-1363.

2015 **Quasi-unital ∞-Categories**, *Algebraic and Geometric Topolgy*, 15.4, p. 2303-2381.

2014 **The Hardy-Littlewood Conjecture and Rational Points**, with Alexei Skorobogatov and Olivier Wittenberg, *Compositio Mathematica*, 150, p. 2095–2111.

2014 **Singular Curves and the Étale Brauer-Manin Obstruction for Surfaces**, with Alexei Skorobogatov, *Annales Scientifiques de l'École Normale Supérieure*, 47, p. 765–778.

2013 **Homotopy Obstructions to Rational Points**, with Tomer Schlank, In: Alexei Skorobogatov (Ed.),*Torsors, Étale Homotpy and Applications to Rational Points*, LMS Lecture Notes Series 405, Cambridge University Press, p. 280–413.

Preprints

2013 **The section conjecture for graphs and singular curves**, arXiv:1304.7213.

2012 **The cobordism hypothesis in dimension 1**, arXiv:1210.0229.

Academic Collaboration and Organization

06/2019 **Minicourse organizer and lecturer**, *Rational points on elliptic fibrations*, Reinventing Rational Points (special semester), Institut Henri Poincaré, Paris.

03/2015 **Assistant to J.-L, Colliot-Thélène**, *The local-global principle for rational points and zero-cycles*, Arizona Winter School (minicourse), University of Arizona.

09/2013 **Workshop co-organizer and lecturer**, *The homotopy theory of ∞-categories*, Université Catholique de Louvain, Louvain-La-Neuve.

07-08/2012 **Minicourse co-organizer and lecturer**, *Étale Homotopy theory and Diophantine equations*, Centre Interfacultaire Bernoulli, École Polytechnique Fédérale de Lausanne, Switzerland.

| 2011 | **Research seminar co-organizer**, *The cobordism hypothesis*, The Hebrew University of Jerusalem (with David Kazhdan and Emmanuel Farjoun). |
| 2009 | **Summer school co-organizer**, *Rational points on algebraic varieties*, The Hebrew University of Jerusalem (with Tomer Schlank). |

Teaching Experience

2020	**Master course**, *Little cube algebras and facotrization homology*, University of Paris 13.
2019	**Master course**, *Little cube algebras and facotrization homology*, University of Paris 13.
2014	**Master course**, *Simplicial Homotopy Theory*, Radboud University Nijmegen.
2011	**Teaching assistant**, *Basic Notions in Algebraic Topology*, The Hebrew University of Jerusalem.
2010	**Teaching assistant**, *Algebraic Structures 1*, The Hebrew University of Jerusalem.
2010	**Teaching assistant**, *Differential Equations*, The Hebrew University of Jerusalem.
2009	**Teaching assistant**, *Basic Notions in Algebraic Topology*, The Hebrew University of Jerusalem.
2009	**Teaching assistant**, *Complex Functions*, The Hebrew University of Jerusalem.
2008	**Teaching assistant**, *Basic Notions in Differential Geometry*, The Hebrew University of Jerusalem.
2007	**Teaching assistant**, *Applied Mathematics*, The Hebrew University of Jerusalem.
2007	**Teaching assistant**, *Linear Algebra for Physicists*, The Hebrew University of Jerusalem.

Selected talks

06/2021	**Relative L-theory and cyclic homology**, *Manifolds and K-theory: the legacy of Andrew Ranicki*, University of Edinburgh.
05/2021	**The Massey vanishing conjecture for number fields**, *Séminaire Homotopie en Géométrie Algébrique*, Université de Toulouse.
02/2021	**The homotopy theory of quadratic forms**, *SFB lecture*, University of Regensburg.
09/2020	**New perspectives in hermitian K-theory (three talks)**, *New perspectives on K- and L-theory*, University of Muenster.
06/2019	**Squares represented by a product of three ternary quadratic forms, and a homogeneous variant of a method of Swinnerton-Dyer**, *Rational points on irrational varieties*, Institut Henri Poincaré.
05/2019	**Supersolvable descent**, *XXIXèmes Rencontres Arithmétiques de Caen: arithmétique des corps et géométrie arithmétique*, Île de Tatihou.
04/2018	**Ambidexterity and the universality of finite spans**, *Séminaire de topologie algebrique*, Université de Paris 13.
03/2018	**Zéro-cycles sur les espaces homogènes et problème de Galois inverse**, *Séminaire théorie de nombres de Bordeaux*, Université de Bordeaux.
03/2018	**Zéro-cycles sur les espaces homogènes et problème de Galois inverse**, *Séminaire théorie de nombres de Jussieu*, Université de Paris 7.
01/2018	**Ambidexterity and the universality of finite spans**, *Séminaire de topologie*, Université de Lille.
10/2017	**Cohomology of higher categories**, *Réunion annuelle du GdR topologie algébrique et applications*, Université de Paris 7.
10/2017	**Quillen obstruction theory**, *Séminaire Homotopie en Géométrie Algébrique*, Université de Toulouse.
07/2017	**Zero-cycles on homogeneous spaces**, *Rational points 2017*, Franken-Akademie Schloss Schney.

06/2017   **Quillen cohomology of enriched categories**, *Séminaire de topologie, géométrie et algèbre*, Université de Nantes.

09/2016   **Second 2-descent and rational points on Kummer surfaces**, *Rational Points and Algebraic Geometry*, Centre International de Rencontres Mathématiques, Luminy.

01/2016   **Abstract representation theory and the cotangent complex formalism**, *Congrès national de la Société Mathématique de France*, Université François Rabelais, Tours.

05/2016   **The cotangent complex formalism**, *Séminaire de Physique Mathématique et de Topologie Algébrique*, Université de Angers, Angers.

04/2016   **Integral points on log K3 surfaces**, *Séminaire Variétés Rationnelles*, ENS, Paris.

04/2016   **Pro-categories in homotopy theory**, *Séminaire de Topologie*, Université de Lille, Lille.

03/2016   **The cobordism hypothesis in dimension 1**, *Séminaire de Topologie, Géométrie et Algèbre*, Université de Nantes, Nantes.

03/2016   **Integral points on log K3 surfaces**, *Séminaire d'Arithmétique et de Géométrie Algébrique*, Université Paris-Sud, Orsay.

01/2016   **Pro-categories in homotopy theory**, *Séminaire de Topologie Algébrique*, Université Paris 13, Paris.

09/2015   **Rational points on fibered varieties**, *Workshop on Interactions between Arithmetic and Homotopy*, Royal Imperial College, London.

07/2015   **The Hasse principle for generalized Kummer varieties** , *Göttingen-Hannover Number Theory Workshop*, Leibniz University of Hannover, Hannover.

01/2015   **The descent-fibration method for integral points**, *Arithmetic geometry, Chow groups and rational points*, The Euler Institute, St. Petersburg.

05/2015   **The descent-fibration method for integral points**, *Heilbronn seminar*, University of Bristol, Bristol.

02/2015   **On the fibration method**, *seminar Variétés Rationnelles*, Institut Henri Poincaré, Paris.

01/2014   **Model fibrations and the Grothendieck correspondence for model categories**, *Higher Geometric Structures along the Lower Rhine V*, Radboud University Nijmegen, Nijmegen.

10/2013   **From linear equations in primes to the fibration method**, *The Intercity Number Theory Seminar*, University of Groningen, Groningen.

01/2013   **The section conjecture for graphs and applications for singular curves**, *London-Paris Number Theory Seminar*, Imperial College, London.

03/2013   **The Hasse principle for singular curves with applications for smooth surfaces**, *Seminar Variétés Rationnelles*, Institut Henri Poincaré, Paris.

12/2012   **The Brauer-Manin obstruction for singular curves and applications for surfaces**, *RatPAC Seminar*, Centre Interfacultaire Bernoulli (EPFL), Lausanne.

11/2012   **Quasi-unital ∞-categories and the cobordism hypothesis in dimension 1**, *Algebraic Topology Seminar*, Radboud University, Nijmegen.

09/2012   **Étale homotopy theory**, *Workshop on Cohomological Methods in Arithmetic Geometry*, Institut für Mathematik, Zurich.

05/2012   **Étale homotopy and Diophantine equations**, *Workshop on Arithmetic Geometry and Homotopy Theory*, Imperial College, London.

05/2012   **Higher categories and the cobordism hypothesis**, *Weekly Mathematics Colloquium*, Haifa University.

01/2012   **Homotopy obstructions to rational points**, *Joint Mathematics Meeting, AMS Special Session on Rational Points on Varieties*, Boston.