

# Léonard Guetta

Postdoc in mathematics

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## Academic positions

- 2023 - **Postdoc position**, *Utrecht University*, Utrecht  
In the group of Paige North
- 2021-2023 **Postdoctoral Fellow**, *Max Planck Institute für Mathematik*, Bonn  
Under the supervision of Viktoriya Ozornova.
- 2019-2021 **A.T.E.R.**, *Université Paris-Cité*  
Temporary teaching assistant in computer science and mathematics.

## Education

- 2016-2020 **PhD in mathematics**, *Université Paris-Cité*, IRIF laboratory, Paris  
“Homology of strict  $\omega$ -categories” under the supervision of François Métayer (Université de Paris) and Clemens Berger (Université de Nice-Sophia Antipolis). Defense held in January 2021.
- 2014-2016 **Master degree in fundamental mathematics**, *Université de Paris*, Paris  
Homotopy Theory, Algebraic Topology, Differential Geometry, Algebra, Functionnal Analysis, Mathematical Logic, etc.
- 2011-2014 **Engineering school**, *ENSTA Paristech*, Paris  
Specialization in applied Mathematics.

## Talks

- Jun. 2023 Polygraphic homology of local systems, *Conference in honor of François Métayer's retirement*, Université Paris-Cité, **Invited speaker**
- Nov. 2022 Groupoid-valued presheaves as models for homotopy types, *Seminar on higher categories, polygraphs and homotopy*, Université Paris-Cité
- Mar. 2022 Homotopy types as  $\infty$ -groupoids, *Part of a miniseries “An introduction to homotopy type theory and univalent foundations”*, MPIM Bonn, **Invited speaker**
- Sep. 2021 Homology of strict  $\omega$ -categories and the bubble-free conjecture, *Workshop “Homotopical Algebra and Higher Structures”*, Oberwolfach, **Invited Speaker**
- Nov. 2019 Homology of strict  $\omega$ -categories, *Seminar on Logic and interactions*, Université Aix-Marseille, **Invited Speaker**
- Oct. 2019 Homotopy colimits and slices of small categories, *Seminar on higher categories, polygraphs and homotopy*, Université Paris-Cité
- Mar. 2018 Non-universality of colimits in the category of strict  $\omega$ -categories, *Seminar on higher categories, polygraphs and homotopy*, Université Paris-Cité
- Feb. 2018 Homology of (1-)categories, *Seminar on higher categories, polygraphs and homotopy*, Université Paris-Cité
- Jun. 2017 A few remarks on the acyclic models method, after M. Barr, *Seminar on higher categories, polygraphs and homotopy*, Université Paris-Cité

## Publications

### Published papers

- 2021 **Homology of categories via polygraphic resolutions**, *Journal of Pure and Applied Algebra*, Vol. 225, No. 10
- 2020 **Polygraphs and discrete Conduché  $\omega$ -functors**, *Higher Structures*, Vol. 4, No. 2
- 2017 **A unifying approach to the acyclic models method and other lifting lemmas**, *Theory and Applications of Categories*, Vol. 32, No. 25

### Preprints

- 2023 **Homologie polygraphique des systèmes locaux**, *arXiv:2309.10466*  
joint work with Georges Maltsiniotis
- 2023 **Fibrantly induced model structures**, *arXiv:2301.07801*  
joint work with Lyne Moser, Maru Sarazola and Paula Verdugo
- 2022 **Presheaves of groupoids as models for homotopy types**, *arXiv:2209.13346*

## Teaching experience

- 2023-2024 **Lecturer for a course on multivariable analysis at master level**, *University College Utrecht*, Utrecht
- 2023-2024 **Teaching assistant for Logics for Computer Science at undergraduate level**, *Utrecht University*, Utrecht
- 2016-2021 **Teaching in computer science at undergraduate level**, *Université Paris-Cité*, Paris
- 2019-2021 **Teaching in mathematics at undergraduate level**, *Université de Paris*, Paris

## Language

**French** *Mother Tongue*  
**English** *Fluent*

**Spanish** *Elementary*  
**German** *Elementary*