

# Najib Idrissi

## Curriculum Vitæ

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### Academic Career

- Since Sept. 2018 **Maître de conférences**, *Université de Paris & Institut de Mathématiques de Jussieu-Paris Rive Gauche (IMJ-PRG)*, Paris, France.
- Feb. 2018–Aug. 2018 **Postdoctoral researcher**, *ETH Zürich*, Zürich, Switzerland.  
Group of Thomas Willwacher. Funded by ERC StG 678156–GRAPHCPX.
- Sept. 2015–Jan. 2018 **Doctorate in Mathematics**, *Université de Lille & Laboratoire Paul Painlevé*, Lille, France.  
Advisor: Benoit Fresse. Title: *Operadic Formality and Homotopy of Configuration Spaces*.  
Thesis defended on November 17th, 2017.
- Sept. 2011–Aug. 2015 **Élève de l'École Normale Supérieure**, *ENS Ulm*, Paris, France.  
2014–2015: Research internship in preparation of a doctorate, Université de Lille.  
2013–2014: Master's degree in Fundamental Mathematics, Université Paris Diderot.  
Fall 2013: Research internship in algebraic topology, Massachusetts Institute of Technology.
- 2009–2011 **Classes préparas (MPSI/MPE)**, *Lycée Henri Wallon*, Valenciennes, France.

### Awards

- 2019–2020 **Peccot Lecture**, *Collège de France – Fondation Claude-Antoine Peccot*, Paris, France.  
“[...] rewards each year young mathematicians under 30 who have been noticed in theoretical or applied mathematics”

### Research

#### Publications

- [1] Ricardo Campos, Julien Ducoulombier, and Najib Idrissi. “Boardman–Vogt resolutions and bar/cobar constructions of (co)operadic (co)bimodules.” In: *High. Struct.* (2021). arXiv: 1911.09474. Forthcoming.
- [2] Najib Idrissi. “Formality of a higher-codimensional Swiss-Cheese operad.” In: *Algebr. Geom. Topol.* (2020). arXiv: 1809.07667. Forthcoming.
- [3] Najib Idrissi. “The Lambrechts–Stanley Model of Configuration Spaces.” In: *Invent. Math.* 216.1 (2019), pp. 1–68. ISSN: 1432-1297. DOI: 10.1007/s00222-018-0842-9. arXiv: 1608.08054.
- [4] Najib Idrissi. “Swiss-Cheese operad and Drinfeld center.” In: *Israel J. Math.* 221.2 (2017), pp. 941–972. DOI: 10.1007/s11856-017-1579-7. arXiv: 1507.06844.

#### Preprints

- [5] Najib Idrissi. *Real Homotopy of Configuration Spaces*. Cours Peccot. 2021. 164 pp. Pre-published.
- [6] Ricardo Campos, Najib Idrissi, and Thomas Willwacher. *Configuration Spaces of Surfaces*. Version 2. 2019. arXiv: 1911.12281. Pre-published. 50 pp.
- [7] Ricardo Campos, Julien Ducoulombier, Najib Idrissi, and Thomas Willwacher. *A model for framed configuration spaces of points*. 2018. arXiv: 1807.08319. Pre-published. 27 pp.
- [8] Ricardo Campos, Najib Idrissi, Pascal Lambrechts, and Thomas Willwacher. *Configuration Spaces of Manifolds with Boundary*. 2018. arXiv: 1802.00716. Pre-published. 107 pp.
- [9] Najib Idrissi. *Curved Koszul duality of algebras over unital versions of binary operads*. Version 3. 2018. arXiv: 1805.01853. Pre-published. 33 pp.

#### Other documents

- [10] Najib Idrissi. “Formalité opéradique et homotopie des espaces de configuration.” PhD thesis. Université Lille 1, Nov. 17, 2017. 173 pp. URL: <http://ori.univ-lille1.fr/notice/view/univ-lille1-ori-455595>.
- [11] Najib Idrissi. “Homologie et complexes de déformations d’opérades  $E_n$ .” Master’s thesis. Université Paris Diderot, 2014.

## Funding

### Obtained

- 2019 Holder of an *Exploratory Project for First Support “Young Researcher (PEPS JCJC)”*, CNRS / Insmi, 3500 €.
- Sept. 2015–Jan. 2018 Specific doctoral contract “*normalien*”, École Normale Supérieure de Paris.

### Member

- 2021–2024 Member of the ANR project “Higher Algebra, Geometry, and Topology (HighAGT)”. Coordinator: Bruno Vallette..
- 2014–2015 Member of the ANR project “*Homotopie algébrique, Opérades et groupes de Grothendieck–Teichmüller (HOGT)*”. Coordinator: Benoit Fresse.

## Supervision

- 2020–2021 **Marie-Camille Delarue**, *Master’s thesis*, Sorbonne Université / ENS.
- Yasamin Jalalian**, *Bachelor thesis*, École Polytechnique.  
Title: *Lie algebras and the PBW theorem*. Defense on April 22<sup>nd</sup>, 2021.

## Service

### Organization

- Since Oct. 2018 **One of the organizers of the Topology Seminar**, *Institut de Mathématiques de Jussieu–Paris Rive Gauche*.
- Jan. 2019–June 2019 **Organization of a reading seminar on homological stability**, *Institut de Mathématiques de Jussieu–Paris Rive Gauche*.
- Oct. 2017 **Participation to the organization of the introductory day for young researchers**, *Colloque 2017 du GDR Topologie Algébrique*, Paris.
- 2016–2017 **One of the organizers of the PhD students’ seminar**, *Laboratoire Paul Painlevé*, Lille.

### Committees

- Jan. 2020 **PhD committee of Erica Minuz (advisor: Marcel Bökstedt)**, *Aarhus University*.
- Sept. 2019 **Master’s memoir committee of Basile Coron (advisor: Thomas Willwacher)**, *Sorbonne Université / ETH Zürich*.
- 2018–2019 **Exam committee for L1 MIASHS**, *Université de Paris*.

### Other

- June 2021– **Contribution au développement du projet ical-ufr**, *Université de Paris*, UFR de Mathématiques. Display of the schedules of Bachelors and Masters in a format readable by humans. I mainly took care of the part visible by users, written in JavaScript/React. <https://gitlab.math.univ-paris-diderot.fr/molin/ical-ufr>
- ongoing **Peer reviews (reports and/or opinions)**.  
Adv. Math. • Alg. Geom. Topol. • Comm. Math. Phys. • Compos. Math. • Geom. Topol. • Homol. Homot. Appl. • J. Algebra • J. Éc. Polytech. Math. • J. Homotopy Relat. Struct. • J. Lond. Math. Soc. • Lett. Math. Phys. • Proc. Roy. Soc. Edinburgh Sect. A • Selecta Math.
- ongoing **Writing of abstracts for Zentralblatt MATH**.

## Talks

- Oct. 2021? **Colloque 2021 du GDR Topologie Algébrique**, *Université de Strasbourg*.
- June 2021 **Séminaire de l’équipe Topologie Algébrique**, *Université Sorbonne Paris–Nord*.
- June 2021 **Viva Talbot**, *MIT*, online.

- June 2021 **Barcelona Conference on Higher Structures**, *Centre de Recerca Matemàtica (CRM)*, postponed to 2022.
- May 2021 **Algebra and Topology Seminar**, *Københavns Universitet*, online.
- May 2021 **Topology and Geometry seminar**, *University of Haifa*, online.
- Mar. 2021 **Topology Seminar**, *Massachusetts Institute of Technology (MIT)*, online.
- Feb. 2021 **Research Seminar on Algebraic Topology**, *Universität Hamburg*, online.
- Jan. 2021 **Séminaire Algèbre et topologie**, *Université de Strasbourg*, online.
- Oct. 2020 **Topology seminar**, *Northeastern University*, online.
- Apr. 2020 **Toric Topology Research Seminar**, *Institut Fields*, online.
- Feb. 2020 **Málaga & Topology Meeting**, *Universidad de Málaga*.
- Jan. 2020 **Seminar**, *Aarhus Universitet*.
- Dec. 2019 **Opening workshop of the OCHoTop project**, *École Polytechnique Fédérale de Lausanne (EPFL)*.
- Nov. 2019 **Journée de topologie**, *Université de Picardie Jules Verne*.
- July 2019 **Algebraic Topology Seminar**, *Université catholique de Louvain*.
- May 2019 **Higher Homotopy Algebras in Topology**, *Max-Planck-Institut für Mathematik (MPIM)*.
- May 2019 **Topology Seminar**, *Institut de Mathématiques de Jussieu-Paris Rive Gauche*.
- Jan. 2019 **Higher Structures**, *Centre International de Rencontres Mathématiques (CIRM)*.
- Dec. 2018 **Stockholm Topology Seminar**, *Stockholm Universitet & KTH*.
- Nov. 2018 **Geometry & Topology Seminar**, *Institut de Mathématiques de Jussieu-Paris Rive Gauche*.
- June 2018 **Derived Geometry and Higher Categorical Structures in Geometry and Physics (junior speaker)**, *Fields Institute*.
- June 2018 **Colloque du département**, *University of Regina*.
- May 2018 **Graph Complexes, Configuration Spaces and Manifold Calculus**, *University of British Columbia*.
- Dec. 2017 **Topology, Geometry, and Algebra seminar**, *Université de Nantes*.
- Dec. 2017 **Algebra and Topology seminar**, *Université de Strasbourg*.
- Nov. 2017 **Mathematical Physics and Algebraic Topology Seminar**, *Université d'Angers*.
- Nov. 2017 **Homotopy in Algebraic Geometry Seminar**, *Université Paul Sabatier*.
- Oct. 2017 **Singular Spaces Geometry Seminar ( $\times 2$ )**, *Université de Lille*.
- Oct. 2017 **Séminaire Itinérant de Catégories**, *Université du Littoral Côte d'Opale*.
- Aug. 2017 **Talks in mathematical physics**, *ETH Zürich*.
- July 2017 **Young Topologists Meeting 2017**, *Stockholm Universitet & KTH*.
- May 2017 **Singular Spaces Geometry Seminar ( $\times 2$ )**, *Université de Lille*.
- Feb. 2017 **Conference for Young researchers in homotopy theory and categorical structures**, *Max-Planck-Institut für Mathematik (MPIM)*.
- Jan. 2017 **Algebraic Topology Seminar**, *Université catholique de Louvain*.
- Nov. 2016 **Algebraic Topology Seminar**, *Université Paris 13*.
- Oct. 2016 **Conference in the honour of Saïd Zarati**, *Institut des Hautes Études à Tunis*.
- Oct. 2016 **2016 Meeting of the GDR Algebraic Topology and Applications**, *Université de Picardie Jules Verne*.
- Sept. 2016 **Topology Seminar**, *Université de Lille*.
- June 2016 **Talks in Mathematical Physics**, *ETH Zürich*.
- Apr. 2016 **Topology Seminar**, *Institut de Mathématiques de Jussieu-Paris Rive Gauche*.
- Dec. 2015 **PhD students' seminar**, *Université de Lille*.
- Dec. 2015 **PhD students' seminar**, *Université de Picardie Jules Verne*.
- Oct. 2015 **Algebraic Topology seminar**, *Université catholique de Louvain*.
- Sept. 2015 **Topology Seminar**, *Université de Lille*.

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## Teaching

- 2021–2022 *Homotopy II*, M2 Fundam. Math (lectures, 24 h).  
*Algorithms and Programming*, L2 (Exercise sessions & Labs, 42 h).  
Mathematical Reasoning 2, L1 MIASHS (lectures, organisation, exercise sessions, 18+5+18 h).  
*Affine and Euclidean geometry 5*, L3 Maths (exercise sessions, 18 h).  
*Elementary mathematics 1*, L1 (exercise sessions, 54 h).
- 2020–2021 *Homotopy II*, M2 Fundam. Math (lectures, 24 h).  
*Elementary Algebra and Analysis 1 + Mathematical Reasoning 1*, L1 Maths (lecture+exercises, 56.5 h).  
*Elementary Algebra and Analysis 2*, L1 Chemistry (exercises, 36 h).  
*Algorithms and Programming*, L2 (Exercise sessions & Labs, 42 h).
- 2019–2020 *Real Homotopy of Configuration Spaces*, Peccot Lecture, Collège de France (8 h).  
*Introduction to Homotopy Theory*, M2 Fundam. Math (lectures, 24 h).  
*Elementary Algebra and Analysis 1 + Mathematical Reasoning 1*, L1 MIASHS (lecture+exercises, 56.5 h).  
*Elementary Algebra and Analysis 2*, L1 Chemistry (exercises, 36 h).  
*Algorithms and Programming*, L2 Maths (Exercise sessions & Labs, 42 h).
- 2018–2019 *Elementary Algebra and Analysis 1*, L1 MIASHS (lecture+exercises, 72 h).  
*Elementary Algebra and Analysis 2*, L1 Chemistry (exercises, 36 h).
- 2017–2018 *Calculus 1*, L1 MASS (exercises, 36 h).  
*Fundamental mathematics 1*, L1 SESI (oral exams & tutoring, 16 h + 10 h).
- 2016–2017 *Matrix calculus*, L2 econ-management (exercises, 36 h).  
*Calculus 1*, L1 econ-management (exercises, 15 h).  
*Calculus 1*, L1 MASS (exercises, 15 h).
- 2015–2016 *Fundamental mathematics 2*, L1 SESI (exercises, 66 h).

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## Visits

- July 2019 Université catholique de Louvain – Pascal Lambrechts (5 d.).  
June 2019 ETH Zurich – Thomas Willwacher (5 d.).  
June 2018 University of Regina – Don Stanley (10 d.).  
Aug. 2017 ETH Zurich – Thomas Willwacher (5 d.).  
Jan. 2017 Université catholique de Louvain – Pascal Lambrechts (5 d.).  
June 2016 ETH Zurich – Thomas Willwacher (4 d.).

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## Conferences attended

- 2021 *Colloque 2021 du GDR Topologie Algébrique et Applications?* (Université de Strasbourg) • *Mid-term workshop of the OCHoTop project* (Université de Lille) • *Barcelona Conference on Higher Structures* (Centre de Recerca Matemàtica, Barcelona) [Postponed due to COVID-19].
- 2020 *Toric Topology and Polyhedral Products* (Fields Institute) [cancelled due to Covid19] • *Málaga & Topology Meeting* (Universidad de Málaga).
- 2019 *Opening workshop of the OCHoTop project* (EPFL) • *Journée de topologie* (Université de Picardie Jules Verne) • *Colloque 2019 du GDR Topologie Algébrique et Applications* (Université d'Artois) • *Groupe de travail : Valeurs zêta multiples en quantification par déformation* (Université de Montpellier) • *SYM 10 Years Old* (Københavns Universitet) • *Topologie de basse dimension : Colloque en l'honneur de Christian Blanchet* (Université Paris Diderot) • *Higher Homotopy Algebras in Topology* (Max-Planck-Institut für Mathematik, Bonn) • *Structures Supérieures* (Centre International de Rencontres Mathématiques, Luminy) • *Higher Structures in Holomorphic and Topological Field Theory* (Institut des Hautes Études Scientifiques).

- 2018 *New trends in K-theory and homotopy theory – A conference in honor of Max Karoubi's 80th birthday* (Institut Henri Poincaré, Paris) • *Colloque 2018 du GDR Topologie Algébrique* (Université de Montpellier) • *Derived Geometry and Higher Categorical Structures in Geometry and Physics* (Fields Institute) • *Graph Complexes, Configuration Spaces and Manifold Calculus* (University of British Columbia) • *Rational Homotopy and its Applications* (Université de Lille).
- 2017 *Colloque 2017 du GDR Topologie Algébrique* (Université Paris Diderot) • *Séminaire Itinérant de Catégories* (Université du Littoral Côte d'Opale) • *Journée des doctorants du Nord-Pas-de-Calais* (Université du Littoral Côte d'Opale) • *Workshop on Persistent Homology* (Université de Montpellier) • *Young Topologists Meeting 2017* (Stockholm Universitet & KTH) • *Algebraic Topology and Representation Theory* (Université de Lille) • *Derived Algebraic Geometry and Interactions* (Université de Toulouse) • *Fourth Young Mathematicians Colloquium* (Vrije Universiteit Brussel) • *Lens Topology and geometry 2017* (Université d'Artois, Lens) • *Workshop on Quantum Topology* (Université de Lille) • *Conference for Young researchers in homotopy theory and categorical structures* (Max-Planck-Institut für Mathematik, Bonn).
- 2016 *Conference in the honour of Saïd Zarati* (Institut des Hautes Études à Tunis) • *Colloque 2016 du GDR Topologie Algébrique et Applications* (Université de Picardie Jules Verne) • *Young Topologists Meeting 2016* (Københavns Universitet) • *Workshop: Factorization Algebras and Functorial Field Theories* (Mathematisches Forschungsinstitut Oberwolfach) • *Séminaire Itinérant de Catégories* (Université de Lille).
- 2015 *Colloque 2015 du GDR Topologie Algébrique et Applications* (Université de Toulouse-3) • *Lens Topology and geometry 2015* (Université d'Artois, Lens) • *Introductory School – Homotopy theory, manifolds, and field theories* (Hausdorff Research Institute for Mathematics) • *Séminaire du projet ANR HOGT* (Université de Strasbourg) • *Second Young Mathematicians Colloquium* (KU Leuven Kulak) • *Séminaire Itinérant de Catégories* (Université du Littoral Côte d'Opale, Calais) • *Masterclass : K-théorie topologique et applications* (Université de Strasbourg) • *Séminaire du projet ANR HOGT* (Université de Lille).
- 2014 *Colloque 2014 du GDR Topologie Algébrique et Applications* (Université Blaise Pascal) • *Colloque de clôture du projet ANR HOGT* (Université de Nice) • *Espaces des lacets en géométrie et topologie* (Université de Nantes) • *Young Topologists Meeting 2014* (Københavns Universitet) • *Young Mathematicians Colloquium* (Université de Lille) • *Séminaire du projet ANR HOGT* (Université de Lille).
- 2013 *Gelfand Centennial Conference: A View of 21st Century Mathematics* (Massachusetts Institute of Technology) • *Conference in Algebra and Topology celebrating Lionel Schwartz's 60th birthday* (Université de Nantes).