# Najib Idrissi

Curriculum Vitæ.

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# **Academic Career**

Since 09/2018 **Maître de conférences**, Université Paris Diderot / Institut de Mathématiques de Jussieu-Paris Rive Gauche, Paris, France.

02/2018–08/2018 **Postdoctoral researcher**, ETH Zürich / D-MATH, Zürich, Switzerland.

Group of Thomas Willwacher. Funded by ERC StG 678156-GRAPHCPX.

09/2015-01/2018 **Doctorate in Mathematics**, Université Lille 1 / Laboratoire Paul Painlevé, Lille, France.

Thesis defended on November 17th, 2017. Advisor: Benoit Fresse.

Title: Operadic Formality and Homotopy of Configuration Spaces.

09/2011-08/2015 **Élève fonctionnaire stagiaire**, École Normale Supérieure de Paris, Paris, France.

Ranked 1<sup>st</sup> on the "INFO" competitive entrance exam.

2014–2015: Research internship in preparation of a PhD, Université Lille 1.

2013–2014: Master's degree in Fundamental Mathematics, Université Paris Diderot.

Fall 2013: Research internship in algebraic topology, Massachusetts Institute of Technology.

### Research

#### **Publications**

- [1] Najib Idrissi. "The Lambrechts-Stanley Model of Configuration Spaces". In: *Invent. Math* (2018), pp. 1-68. ISSN: 1432-1297. DOI: 10.1007/s00222-018-0842-9. arXiv: 1608.08054. In press.
- [2] 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**

- [3] Ricardo Campos, Julien Ducoulombier, Najib Idrissi, and Thomas Willwacher. A model for framed configuration spaces of points. 2018. arXiv: 1807.08319. Submitted. 27 pp.
- [4] Ricardo Campos, Najib Idrissi, Pascal Lambrechts, and Thomas Willwacher. *Configuration Spaces of Manifolds with Boundary*. 2018. arXiv: 1802.00716. Submitted. 107 pp.
- [5] Najib Idrissi. Curved Koszul Duality for Algebras over Unital Operads. 2018. arXiv: 1805.01853. Submitted. 33 pp.
- [6] Najib Idrissi. Formality of a higher-codimensional Swiss-Cheese operad. 2018. arXiv: 1809.07667. Submitted. 40 pp.

## Other documents

- [7] 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.
- [8] Najib Idrissi. "Opérades et Structures Commutatives à Homotopie Près". In: *Grad. J. Math* 1.1 (2016), pp. 9-17. ISSN: 1737-0299. URL: http://www.gradmath.org/article/operades-et-structures-commutatives-a-homotopie-pres/.
- [9] Najib Idrissi. "Homologie et complexes de déformations d'opérades  $E_n$ ". Master's thesis. Université Paris Diderot, 2014.

Service

| Since 10/2018                 | One of the organizers of the Topology Seminar, Institut de Mathématiques de Jussieu-Paris Rive Gauche, Paris, France.   |
|-------------------------------|---|
| 2019                          | <b>Organization of a working seminar on homological stability</b> , <i>Institut de Mathématiques de Jussieu-Paris Rive Gauche</i> , Paris, France.  |
| 10/2017                       | Participation to the organization of the introductory day for young researchers, Colloque 2017 du GDR Topologie Algébrique, Paris, France.  |
| 2016-2017                     | One of the organizers of the PhD students' seminar, Laboratoire Paul Painlevé, Lille, France.   |
| ongoing                       | Peer reviews.  Algebraic & Geometric Topology, Communications in Mathematical Physics, Letters in Mathematical Physics, Royal Society of Edinburgh: Proceedings A, Selecta Mathematica  Writing of abstracts for Zentralblatt MATH. |
|                               | Funding   |
| 2019                          | Exploratory Project, First Support "Young Researcher" (PEPS JCJC), CNRS / Insmi, 3500 €   |
| 2015-2018                     | Specific doctoral contract "normalien", École Normale Supérieure de Paris   |
| 05/2016                       | Oberwolfach Leibniz Graduate Students (for the workshop "Factorization Algebras and Functorial Field Theories")   |
|                               | Research visits   |
| 06/2019 <sup>*</sup> , 5 days | ETH Zurich - Thomas Willwacher  |
| 06/2018, 10 days              | University of Regina – Don Stanley  |
| 08/2017, 5 days               | ETH Zurich - Thomas Willwacher  |
| 01/2017, 5 days               | Université catholique de Louvain – Pascal Lambrechts  |
| 06/2016, 4 days               | ETH Zurich - Thomas Willwacher  |
|                               | Talks   |
|                               | Invited   |
| 05/2019*                      | Higher Homotopy Algebras in Topology, MPIM, Bonn, Germany.  |
| 01/2019                       | <b>Higher Structures</b> , <i>Centre international de rencontres mathématiques (CIRM)</i> , Luminy, France. Configuration spaces and operads  |
| 06/2018                       | Derived Geometry and Higher Categorical Structures in Geometry and Physics (junior speaker at the summer school), Fields Institute, Toronto, Canada.  Curved Koszul Duality for Algebras over Unital Operads                        |
| 05/2018                       | Graph Complexes, Configuration Spaces and Manifold Calculus, University of British Columbia, Vancouver, Canada.  Configuration Spaces of Manifolds with Boundary  |
| 10/2017                       | Séminaire Itinérant de Catégories, Université du Littoral Côte d'Opale, Calais, France.<br>L'opérade Swiss-Cheese et le centre de Drinfeld  |
| 10/2016                       | Conference in the honour of Saïd Zarati, Institut des Hautes Études (IHET), Tunis, Tunisia.<br>The Lambrechts-Stanley Model of Configuration Spaces   |
|                               | Contributed   |
| 07/2017                       | <b>Young Topologists Meeting 2017</b> , <i>Stockholm Universitet &amp; KTH</i> , Stockholm, Sweden. The Lambrechts-Stanley Model of Configuration Spaces  |
| 02/2017                       | Conference for Young researchers in homotopy theory and categorical structures, MPIM, Bonn, Germany.  The Lambrechts-Stanley Model of Configuration Spaces  |

| 10/2016 | <b>2016 Meeting of the GDR Algebraic Topology and Applications</b> , <i>Université de Picardie Jules Verne – LAMFA</i> , Amiens, France. The Lambrechts–Stanley Model of Configuration Spaces                |
|---------|--|
|         | Seminars   |
| 12/2018 | <b>Stockholm Topology Seminar</b> , <i>Stockholm Universitet &amp; KTH</i> , Stockholm, Sweden. Configuration spaces and Operads   |
| 11/2018 | <b>Geometry &amp; Topology Seminar</b> , <i>IMJ-PRG</i> , Paris, France. Espaces de configuration et Opérades  |
| 06/2018 | <b>Colloque du département</b> , <i>University of Regina</i> , Regina (SK), Canada.<br>Configuration Spaces and Graphs Complexes   |
| 12/2017 | <b>Topology, Geometry, and Algebra seminar</b> , <i>Université de Nante</i> s, Nantes, France.<br>Espaces de configuration de variétés compactes   |
| 12/2017 | Algebra and Topology seminar, <i>Université de Strasbourg</i> , Strasbourg, France.<br>Espaces de configuration de variétés compactes  |
| 11/2017 | Mathematical Physics and Algebraic Topology Seminar, <i>Université d'Angers</i> , Angers, France. Espaces de configuration de variétés compactes   |
| 11/2017 | <b>Homotopy in Algebraic Geometry Seminar</b> , <i>Université Paul Sabatier</i> , Toulouse, France. Espaces de configuration de variétés compactes   |
| 10/2017 | Singular Spaces Geometry Seminar, <i>Université Lille</i> 1, Lille, France.<br>Introduction à la théorie de l'homotopie rationnelle  |
| 10/2017 | <b>Singular Spaces Geometry Seminar</b> , <i>Université Lille</i> 1, Lille, France.<br>L'opérade Swiss-Cheese et le centre de Drinfeld   |
| 08/2017 | <b>Talks in mathematical physics</b> , <i>ETH Zürich</i> , Zürich, Switzerland. Configuration Spaces of Compact Manifolds  |
| 05/2017 | <b>Singular Spaces Geometry Seminar</b> , <i>Université Lille</i> 1, Lille, France.<br>Le modèle de Lambrechts-Stanley des espaces de configuration  |
| 05/2017 | Singular Spaces Geometry Seminar, Université Lille 1, Lille, France.<br>La compactification de Fulton-MacPherson des espaces de configuration  |
| 01/2017 | Algebraic Topology Seminar, Université Catholique de Louvain – Institut de recherche en mathématique et physique, Louvain-la-Neuve, Belgium.<br>Le modèle de Lambrechts-Stanley des espaces de configuration |
| 11/2016 | Algebraic Topology Seminar, Université Paris 13, Paris, France.<br>Le modèle de Lambrechts-Stanley des espaces de configuration  |
| 09/2016 | <b>Topology Seminar</b> , <i>Université Lille 1</i> , Lille, France.<br>Le modèle de Lambrechts-Stanley des espaces de configuration   |
| 06/2016 | <b>Talks in Mathematical Physics</b> , <i>ETH Zürich</i> , Zürich, Switzerland.<br>Swiss-Cheese operad and Drinfeld center   |
| 04/2016 | <b>Topology Seminar</b> , <i>IMJ-PRG</i> , Paris, France.<br>L'opérade Swiss-Cheese et le centre de Drinfeld   |
| 12/2015 | <b>PhD students' seminar</b> , <i>Université Lille 1 – Laboratoire Paul Painlevé</i> , Lille, France.<br>Opérades  |
| 12/2015 | <b>PhD students' seminar</b> , <i>Université de Picardie Jules Verne – LAMF</i> A, Amiens, France. Opérades  |
| 10/2015 | Algebraic Topology seminar, Université Catholique de Louvain – Institut de recherche en mathématique et physique, Louvain-la-Neuve, Belgium.<br>L'opérade Swiss-Cheese et le centre de Drinfeld              |
| 09/2015 | <b>Topology Seminar</b> , <i>Université Lille 1 – Laboratoire Paul Painlevé</i> , Lille, France.<br>L'opérade Swiss-Cheese et le centre de Drinfeld  |

# **Teaching**

| 2018-2019 | Elementary Algebra and Analysis 1, L1 MIASHS (lecture+exercises, 90h); Elementary Algebra |
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|           | and Analysis 2, L1 Chemistry (exercises, 36h)   |

- 2017–2018 Calculus 1, L1 MASS (exercises, 36h); Fundamental mathematics 1, L1 SESI (oral exams & tutoring, 10h)
- 2016–2017 Matrix calculus, L2 econ-management (exercises, 36h); Calculus 1, L1 econ-management (exercises, 15h); Calculus 1, L1 MASS (exercises, 15h)
- 2015-2016 Fundamental mathematics 2, L1 SESI (exercises, 66h)

|          | Conferences, workshops and thematic schools attended  |
|----------|---|
| 06/2019* | SYM 10 Years Old @ Københavns Universitet   |
| 05/2019* | Higher Homotopy Algebras in Topology @ MPIM Bonn  |
| 01/2019  | Higher Structures @ Centre international de rencontres mathématiques (CIRM, Luminy)   |
| 01/2019  | Higher Structures in Holomorphic and Topological Field Theory @ Institut des Hautes Études<br>Scientifiques                 |
| 10/2018  | New trends in K-theory and homotopy theory – A conference in honor of Max Karoubi's 80th birthday @ Institut Henri Poincaré |
| 10/2018  | Colloque 2018 du GDR Topologie Algébrique @ Université de Montpellier   |
| 06/2018  | Derived Geometry and Higher Categorical Structures in Geometry and Physics @ Fields Institute                               |
| 05/2018  | Graph Complexes, Configuration Spaces and Manifold Calculus @ University of British Columbia                                |
| 01/2018  | Rational Homotopy and its Applications @ Université de Lille  |
| 10/2017  | Colloque 2017 du GDR Topologie Algébrique @ Université Paris 7  |
| 10/2017  | Séminaire Itinérant de Catégories @ Université du Littoral Côte d'Opale   |
| 09/2017  | Journée des doctorants du Nord-Pas-de-Calais @ Université du Littoral Côte d'Opale  |
| 07/2017  | Workshop on Persistent Homology @ Université de Montpellier   |
| 07/2017  | Young Topologists Meeting 2017 @ Stockholm Universitet & KTH  |
| 06/2017  | Algebraic Topology and Representation Theory @ Université de Lille  |
| 06/2017  | Derived Algebraic Geometry and Interactions @ Université de Toulouse  |
| 06/2017  | Fourth Young Mathematicians Colloquium @ Vrije Universiteit Brussel   |
| 05/2017  | Lens Topology and geometry 2017 @ Université d'Artois (Lens)  |
| 03/2017  | Workshop on Quantum Topology @ Université Lille 1   |
| 02/2017  | Conference for Young researchers in homotopy theory and categorical structures @ MPIM Bonn                                  |
| 10/2016  | Conference in the honour of Saïd Zarati @ IHET (Tunis)  |
| 10/2016  | Colloque 2016 du GDR Topologie Algébrique et Applications @ Université de Picardie Jules Verne                              |
| 07/2016  | Young Topologists Meeting 2016 @ Københavns Universitet   |
| 05/2016  | Workshop: Factorization Algebras and Functorial Field Theories @ Mathematisches Forschungsinstitut Oberwolfach              |
| 03/2016  | Séminaire Itinérant de Catégories @ Université Lille 1  |
| 10/2015  | Colloque 2015 du GDR Topologie Algébrique et Applications @ Université de Toulouse-3  |
| 06/2015  | Lens Topology and geometry 2015 @ Université d'Artois (Lens)  |
| 05/2015  | Introductory School – Homotopy theory, manifolds, and field theories @ Hausdorff Research Institute for Mathematics         |
| 03/2015  | Séminaire du projet ANR HOGT @ Université de Strasbourg   |
| 03/2015  | Second Young Mathematicians Colloquium @ KU Leuven Kulak  |
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03/2015 Séminaire Itinérant de Catégories @ Université du Littoral Côte d'Opale (Calais)

| 02/2015 | Masterclass : K-théorie topologique et applications @ Université de Strasbourg                            |
|---------|---|
| 01/2015 | Séminaire du projet ANR HOGT @ Université Lille 1   |
| 10/2014 | Colloque 2014 du GDR Topologie Algébrique et Applications @ Université Blaise Pascal                      |
| 09/2014 | Colloque de clôture du projet ANR HOGT @ Université de Nice   |
| 09/2014 | Espaces des lacets en géométrie et topologie @ Université de Nantes                                       |
| 06/2014 | Young Topologists Meeting 2014 @ Københavns Universitet   |
| 05/2014 | Young Mathematicians Colloquium @ Université Lille 1  |
| 01/2014 | Séminaire du projet ANR HOGT @ Université Lille 1   |
| 09/2013 | Gelfand Centennial Conference: A View of 21st Century Mathematics @ Massachusetts Institute of Technology |
| 05/2013 | Conference in Algebra and Topology celebrating Lionel Schwartz's sixtieth birthday @ Université de Nantes |
|         | (*: Future)   |