

# MARTIN GONZALEZ

Ph.D.

Office: 316,  
Max-Planck-Institut für Mathematik,  
Vivatsgasse 7, 53111 Bonn,  
Germany.

☎ +33 (0) 6 45 01 75 33

✉ [marting@mpim-bonn.mpg.de](mailto:marting@mpim-bonn.mpg.de)

📄 [sites.google.com/view/martin-gonzalez](https://sites.google.com/view/martin-gonzalez)

## Education and employment

2018 (Ongoing) **Postdoctoral Fellow**, Max Planck Institute of Mathematics, Bonn, Germany.

2014 2018 **PhD in Fundamental Mathematics**, Pierre-et-Marie-Curie University, Paris, France.

PhD thesis title: *Contributions to the theory of KZB associators*, supervised by DAMIEN CALAQUE & PIERRE LOCHAK. Defended in October 2018.

2012 2014 **MSc Fundamental Mathematics**, Pierre-et-Marie-Curie University, Paris, France.

Summa Cum Laude (mention "Très Bien").

Master thesis title: *An introduction to Shifted Symplectic Structures*, supervised by GABRIELE VEZZOSI, defended in June 2014.

2009 2012 **Music Diploma "DEM"**, CRR Paris Conservatory, Paris, France.

Summa Cum Laude, *first in class* (mention "Très Bien et Félicitations du Jury").

2008 2011 **BSc Mathematics and Applications**, Claude Bernard University, Lyon, France.

Minor in Computer Sciences.

### Current Interests

Area Algebraic Geometry, Algebraic Topology, Number Theory, Mathematical Physics.

Topics Twisted elliptic KZB connections, associators, motivic fundamental group actions, elliptic multiple zeta values at porsion points.

## (Pre)publications

1. *On the universal twisted elliptic KZB connection* (joint with DAMIEN CALAQUE), ArXiv:1908.03887.

## In preparation

1. *Surface Drinfeld torsors I : higher genus theory.*
2. *Ellipsitomic associators* (joint with DAMIEN CALAQUE).
3. *Asymptotic behaviour of the KZB ellipsitomic associator.*
4. *Linear independence of iterated Eisenstein integrals for congruence subgroups* (joint with NILS MATTHES).
5. *On the operadicity of the KZ log-connection.*
6. *Surface Drinfeld torsors II : orbital theory.*

## Professional Experience

### Scientific Visits

Apr. 2019 **Visitor**, Institute for Theoretical Studies at the ETH Zürich, Switzerland. 10 days.

Jul. 2018 **Visitor**, Nagoya University, Japan. 5 days.

Jun. 2017 **Visitor**, Max Planck Institute for Mathematics, Bonn, Germany. One week.

Mar. 2012 **Research Internship**, Institut Mathématique de Jussieu, Pierre-et-Marie-Curie University, Paris. Essay's title: "**Harmonic and Equianharmonic Equations in the Grothendieck-Teichmüller Group**" under the direction of Pierre Lochak. Five months.

May 2010 **Research Internship**, *Institut Camille Jordan, Claude Bernard University*, Lyon. Essay's title: "**Grothendieck and Lawvere Topoi**" under the direction of Amaury Thuillier. Four months.

### Organized Events

Jul. 2016 **Second International Conference of Ecuadorian Mathematicians**, *Institut Henri Poincaré*, Paris, France.

Jul. 2015 **First International Conference of Ecuadorian Mathematicians**, *Institut Henri Poincaré*, Paris, France.

### Talks

May 2019 **Iterated Eisenstein integrals for congruence subgroups**, Masterclass: Mixed Elliptic Motives, *Stockholm University*, Sweden.

May 2019 **MZVs between operads and the Kronecker function**, Séminaire de mathématiques et philosophie, *Ecole Normale Supérieure (rue d'Ulm)*, Paris, France.

Jul. 2018 **Higher genus KZB connections and MZVs**, Workshop: Elliptic Multiple Zeta Values and Mixed Elliptic Motives, *Nagoya University*, Japan.

Jun. 2018 **Elliptic MZVs at torsion points**, Séminaire des thésards, *Université Pierre-et-Marie-Curie*, France.

Feb. 2017 **On the universal twisted elliptic KZB connection**, KMPB-day, *Humboldt Univ.*, Berlin, Germany.

Nov. 2016 **Adjunction-Extension in Derived Algebraic Geometry**, MaMuPhi seminar, *ENS (Ulm) - IRCAM*, Paris, France.

Jul. 2016 **On four avatars of the universal KZ connection**, Conmatep-II, *Institut Henri Poincaré*, Paris, France.

Nov. 2015 **On four avatars of the universal KZ connection**, Mathematics Department Seminar, *Universidad de Chile*, Santiago de Chile, Chile.

### Attended Events

Sept. 2019 Workshop "Kontsevich formality and Multi-Zeta Values.", *Institut Montpellierain Alexandre Grothendieck*, Montpellier, France.

Apr. 2019 Workshop "Modular forms, periods and scattering amplitudes", *Institute for Theoretical Studies at the ETH Zürich*, Switzerland.

Oct. 2018 Workshop "GDR Topologie Algébrique", *Montpellier University*, France.

Aug. 2017 Summer school "**Motives for Periods**", Freie Universität, Berlin, Germany.

Jun. 2017 Summer school & Conference for Don Zagier's 60th birthday "**Modular forms are everywhere**", MPIM - Bonn, Germany.

Mar. 2017 Workshop "**Hot Topics : Galois theory of periods and applications**", MSRI - Berkeley, USA.

Jul. 2016 International Conference and Summer school "**Poisson 2016**", Geneva and Zurich, Switzerland.

Jun. 2016 International Conference "**Topology of Complex Algebraic Varieties**", *CIRM*, Marseille, France.

Jun. 2015 International Conference "**Mathematics of the 21st century: the vision of Alexander Grothendieck**", *Institut Montpelliérain Alexander Grothendieck*, Montpellier, France.

Jan. 2015 Winter School in Mathematical Physics **Les Diablerets - 2015**, Les Diablerets, Switzerland.

Oct. 2014 International Conference **Tresses et Arithmétique**, *Centre International de Rencontres Mathématiques*, Luminy, France.

Oct. 2014 International Conference **Higher Structures in Geometry and Physics 2014**, *University of Geneva*, Geneva, Switzerland.

Sep. 2014 International Conference **Homotopical Algebra, Operads and Grothendieck-Teichmüller groups**, *Laboratoire J.A. Dieudonné, Nice University*, Nice, France.

- Nov. 2014 Research Seminar **Factorization Algebras and Derived Algebraic Geometry**, *IMJ, Pierre-et-Marie-Curie University*, Paris, France.
- 2013-2014 Research Seminar **Autour des Cycles Algébriques**, *IMJ, Pierre-et-Marie-Curie University*, Paris, France.
- Nov. 2013 Winter School **Derived Algebraic Geometry**, Flumserberg, Switzerland.
- Jul. 2013 International Conference **Journée en l'honneur de Carlos Simpson**, *IMJ, Pierre-et-Marie-Curie University*, Paris, France.
- Jul. 2013 International Conference **Journées Solstice 2013**, *IMJ, Pierre-et-Marie-Curie University*, Paris, France.
- Jul. 2013 International Conference **Journée en l'honneur de Georges Maltsiniotis**, *IMJ, Pierre-et-Marie-Curie University*, Paris, France.
- Jul. 2012 International Conference **CATS4 (Higher Categorical Structures and their Interactions with Algebraic Geometry, Algebraic Topology and Algebra)**, *CIRM, Luminy*, France.
- Feb. 2012 Research Seminar **Autour des travaux de Lurie sur la classification des Théories Topologiques de Champs**, *IMJ, Pierre-et-Marie-Curie University*, Paris, France.
- 2009-2015 Research Seminar **MaMuPhi (Mathématiques, Musique et Philosophie)**, *École Normale Supérieure*, Paris, France.
- 2010-13 Research Seminar **MaMuX**, *Institut de Recherche et Coordination Acoustique/Musique*, Paris, France.

### Teaching Experience

- Jul. 2018 **Mini-course on universal KZB connections**, *Nagoya University*, 5 hours.
- 2015-2016 **Introduction to Algebraic Topology**, *USFQ University*, Graduate course, teacher (with Sinan Yalin, Marc Stephan and Daniela Egas-Santander), 30 hours.
- Nov. 2015 **Mini-course on the Knizhnik-Zamolodchikov associator**, *USFQ University*, Graduate course, teacher, 4 hours.
- 2014-2018 **Various 2nd and 3rd year undergraduate courses**, *Pierre-et-Marie-Curie University*, teaching assistant, 180+96 hours.

### Administrative Duties

2015

2018

2015

**Organiser**, *PhD Student's Seminar, IMJ*, Paris, France.

**Editor**, *Student's Journal of the Amarun Association*, Paris, France.

Supervise editorial work.

Main Duties:

- Publish scientific material for broad audiences
- Supervise scientific material for broad audiences

2011

2013

**Pedagogic Supervisor**, *Amarun Association*, Paris, France.

Supervised editorial work.

Main Duties:

- Publish pedagogical material for graduate and undergraduate students
- Supervise pedagogical material for graduate and undergraduate students

2011

2017

**Treasurer**, *Amarun Association*, Paris, France.

### Programming and Development Skills

**Languages** C/C++, Java, HTML/CSS, Python, **Databases** MySQL, Oracle.  
 PHP, Maple, Scilab, Latex, OpenGL,  
 Sage.

**OS** Windows, Mac, Linux.

### Awards and Honours

- 2012 Author in an official Strauss's "Vier letzte Lieder" concert notice for the Salle Pleyel de Paris.  
2011 Gold Medal Award in Electroacoustics from the French National Ministry of Education.

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## Languages

Spanish	Native
French	Bilingual
English	Academic, Fluent
German	Principiant

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## Miscellaneous

Other studies Higher Education Diplomas between 2008 and 2012 in Contemporary Music Composition (Electroacoustics), Classical Piano, Music History and Musical Analysis, Harmony, Counterpoint and Chamber Music.

Other activities Composed the music of a film presented at Nikon Festival 2017, starring acting role on the film "Heterophonies/68" presented at the Coté-Court film festival in Paris 2018.

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## References

You can ask about my work to

Damien Theses advisor, email : [damien.calaque@umontpellier.fr](mailto:damien.calaque@umontpellier.fr).  
Calaque

Benjamin Theses referee, email : [enriquez@math.unistra.fr](mailto:enriquez@math.unistra.fr).  
Enriquez