

# Carlos León

11 Boulevard Marie et Pierre Curie  
Bâtiment H3, 0-16. Poitiers, France

☎ (+33) 06 56 84 70 48

✉ Carlos.Augusto.Leon.Gil@math.univ-poitiers.fr

📄 carlosleongil.github.io



**Areas of interest:** Integrable systems, Poisson geometry, Mathematical physics, Algebraic geometry, Non-linear evolution equations, Partial differential equations.

## Education

- 2016-2020 **PhD in Mathematics**, *University of Poitiers, UFR SFA, LMA: Laboratoire de Mathématiques et Applications*, Poitiers, France  
Title: *Sur l'intégrabilité algébrique des systèmes de Bogoyavlenskij-Itoh déformés à 5 particules.*  
*On the algebraic integrability of the deformed 5-particle Bogoyavlenskij-Itoh systems.*  
Thesis advisor: Professor Pol Vanhaecke.  
Thesis defended on December 10, 2020.
- 2014-2016 **MSc in Mathematics**, *National University of Colombia*, Medellín, Colombia  
GPA: 4.7/5.0. *Tesis Meritoria* (award master's thesis distinction).  
Title: *Decay of solutions of dispersive equations and Poisson Brackets in Algebraic Geometry.*  
Supervisors: Professors *Pedro Isaza J. & Pol Vanhaecke*.
- 2010-2013 **BSc in Mathematics**, *National University of Colombia*, Medellín, Colombia  
GPA: 4.5/5.0. *Grado de Honor* (distinction with the highest honors; prize awarded to continue graduate studies).

## Experience

### Teaching and Research

**ATER Instructor**, *TD: Mathématiques générales, Calcul matriciel, Compléments mathématiques I & Sciences de la Vie et de la Terre (SVT)*, University of Poitiers, Poitiers. Attaché Temporaire d'Enseignement et de Recherche (ATER) contract, 192h, 2020-2021

**ATER Instructor**, *TD: Mathématiques fondamentales & Mathématiques appliquées*, University Institute of Technology (IUT), University of Poitiers, Poitiers. Attaché Temporaire d'Enseignement et de Recherche (ATER) contract, 192h, 2019-2020

**Instructor**, *TD: Calcul matriciel & Sciences de la vie et de la Terre (SVT)*, University of Poitiers, Poitiers. Doctorants Contractuels à Activité Complémentaire d'Enseignement (DCACE) Contract, 48h, 2018-2019

**Ad Honorem Teaching Assistant**, *Course: Multivariable Calculus*, National University of Colombia, Medellín, Colombia. August 2015 - November 2015 & February 2016 - May 2016

**Instructor**, *TD: Differential Equations*, National University of Colombia, Medellín, Colombia. August 2012 - November 2012 & February 2013 - May 2013 & August 2013 - November 2013

### Various

**Instructor**, *Precalculus*, Santa Rosa de Osos, Colombia, Plan de Mejoramiento de la enseñanza y apropiación de las matemáticas en los colegios de Antioquia (*Program for the Improvement of the teaching and appropriation of mathematics in the schools of Antioquia*). October 2012 - November 2012 & August 2013 - October 2013

**Instructor**, Envigado, Colombia, II & III Encuentro con los Números y Festival de los Números (Intervenant at the *Festival of Numbers*). September 27, 2014 & October 19, 2013

---

## Conferences, Workshops and Seminars

- 2022 **Lie Theory and Poisson Geometry**, *Speaker*. Talk: “Algebraic integrability of the 5-particle dressing chain”, CIRM, Marseille, France
- 2021 **Rencontre Poisson 2020-21**, *Participant*, La Rochelle University, La Rochelle, France
- 2021 **Rencontre du GDR-GDM**, *Speaker*. Talk: “Décroissance exponentielle des solutions de l'équation KdV”, LASIE & LMA, La Rochelle, France
- 2021 **Junior Global Poisson Workshop II**, *Participant*, Four-Day Virtual Conference for Junior Researchers in Poisson Geometry and Related Fields
- 2020 **Rencontre du GDR-GDM**, *Participant*, Annual virtual conference of *Differential Geometry and Mechanics*. Sorbonne University, Paris Jussieu
- 2019 **Rencontre du GDR-GDM**, *Speaker*. Talk: “Intégrabilité algébrique du dressing chain à 5 particules”, LASIE & LMA, La Rochelle, France
- 2019 **Integrable systems and automorphic forms**, *Participant*, University of Lille, Laboratoire Paul Painlevé, Lille, France
- 2018 **Rencontre Poisson 2018**, *Participant*, La Rochelle University, La Rochelle, France
- 2017 **Finite Dimensional Integrable Systems in Geometry and Mathematical Physics**, *Participant*, Centre de Recerca Matemàtica (CRM), Barcelona, Spain
- 2016 **Journées de Géométrie Algébrique Poitiers-Bordeaux**, *Participant*, University of Poitiers, Poitiers, France
- 2016 **V Latin American Congress of Mathematics (CLAM)**, *Participant*, University of the North, Barranquilla, Colombia
- 2016 **School and Conference on Noncommutative Geometry 2016**, *Participant*, Villa de Leyva, Colombia
- 2015 **XX Colombian National Congress of Mathematics**, *Speaker*. Talk: “Decaimiento de soluciones de ecuaciones dispersivas”, National University of Colombia, Manizales, Colombia
- 2014 **School and Workshop on Singularities in Geometry, Topology, Foliations and Dynamics**, *Participant*, IM Cuernavaca, Cuernavaca, Mexico
- 2014 **International Conference on Algebraic Methods in Dynamical Systems**, *Participant*, Barranquilla, Colombia
- 2014 **Poisson 2014**, *Participant*, University of Illinois at Urbana-Champaign, Urbana-Champaign, USA
- 2014 **Real Algebraic Geometry**, *Participant*, CIMPA, Villa de Leyva, Colombia
- 2013 **Jornadas de Geometría Diferencial Algebraica**, *Participant*, Los Andes University, Bogota, Colombia
- 2013 **XIX Colombian National Congress of Mathematics**, *Participant*, University of the North, Barranquilla, Colombia

---

## Popularization and Scientific communication

- 2018 *Fête de la Science 2018* at the University of Poitiers. Popularization of mathematics for the general public: animations, and posters related to everyday mathematical objects. Place: *Espace Mendès France, Poitiers, France*. Weekend from October 6 to 7.
- 2018 *MATh.en.JEANS 2018*. Congress organized by LMA (Laboratoire de Mathématiques et Applications) of the University of Poitiers in collaboration with IREM (Institut de Recherche sur l'Enseignement des Mathématiques) aimed at middle and high school students in the west of France. Place: *University of Poitiers Campus, Poitiers, France*. March 23 to 25 .
- 2014-2016 *Concurso de Integrales*. Jury and logistics collaborator in versions VI, VII and VIII of the Integrals Competition (*Concurso de Integrales*). Place: *National University of Colombia, Medellin, Colombia*.

---

## Publications

2017 Isaza, P., León, C., On optimal exponential decay properties of solutions to the Korteweg-de Vries equation. *Journal of Differential Equations*, Volume 263, Issue 9, 5 November 2017, Pages 5189-5215. <https://doi.org/10.1016/j.jde.2017.06.013>.

Preprint León, C., On the algebraic integrability of the deformed 5-particle BI systems.

---

## Prizes and awards

- 2013 1st place in VI Integrals Competition, National University of Colombia, Medellin, Colombia.
- 2012 1st place in V Integrals Competition, National University of Colombia, Medellin, Colombia.
- 2011 Finalist in the Colombian National Mathematical Olympiad for University Students, Bogota, Colombia.
- 2009 Fellowship honors award at UPB high school, Medellin, Colombia.
- 2009 Semi-finalist at *Olimpiadas del Conocimiento*, Medellin, Colombia.
- 2009 3rd place in XVIII Maths and Physics Competition, EAFIT University, Medellin, Colombia.
- 2009 10th place at the Regional Chemistry Olympiad, University of Antioquia, Medellin, Colombia.
- 2009 1st place in The Mathematical Olympiad at UPB High School, Medellin, Colombia.
- 2008 Finalist in The Mathematical Olympiad, University of Antioquia, Medellin, Colombia.
- 2006 Finalist in The Mathematical Olympiad, University of Antioquia, Medellin, Colombia.

---

## Skills

### Computer skills & Programming languages

LaTeX, Maple, Python, JavaScript, HTML, CSS.

---

## Languages

- Spanish** Native language. C2 level.
- English** Proficient. C1 level.
- French** Proficient. C1 level.
- Italian** Threshold Intermediate. B1 level.

---

## References

### Professor Pol Vanhaecke

Laboratoire de Mathématiques et Applications  
UMR 7348 CNRS-University of Poitiers  
Poitiers, FR 86000  
✉ [Pol.Vanhaecke@math.univ-poitiers.fr](mailto:Pol.Vanhaecke@math.univ-poitiers.fr)  
☎ +33 05 49 49 68 87

### Assistant Professor Enrica Floris

Laboratoire de Mathématiques et Applications  
UMR 7348 CNRS-University of Poitiers  
Poitiers, FR 86000  
✉ [Enrica.Floris@math.univ-poitiers.fr](mailto:Enrica.Floris@math.univ-poitiers.fr)  
☎ +33 05 49 49 69 10

### Professor Emeritus Jorge Cossio

Escuela de Matemáticas  
National University of Colombia, Medellin  
Medellin, CO 050010  
✉ [jccossio@unal.edu.co](mailto:jccossio@unal.edu.co)  
☎ +57 430 93 57

### Professor Guido Carlet

Institut de Mathématiques de Bourgogne  
UMR 5584 CNRS-Université de Bourgogne  
Dijon, FR 21078  
✉ [guido.carlet@u-bourgogne.fr](mailto:guido.carlet@u-bourgogne.fr)  
☎ +33 03 80 39 58 53

### Professor Pedro Isaza

Escuela de Matemáticas  
National University of Colombia, Medellin  
Medellin, CO 050010  
✉ [pisaza@unal.edu.co](mailto:pisaza@unal.edu.co)  
☎ +57 430 90 00

### Professor David Blázquez Sanz

Escuela de Matemáticas  
National University of Colombia, Medellin  
Medellin, CO 050010  
✉ [dblazquez@unal.edu.co](mailto:dblazquez@unal.edu.co)  
☎ +57 430 98 77