



Mercedes HAIECH

Associated professor

Positions

2021-... **Associated professor**, *University of Limoges, XLIM, Limoges, FRANCE.*

Education

2011-2014 **Preparatory classes for grandes écoles, Maths and Physics**, *Henri IV, Paris, FRANCE.*

2014-2018 **Student**, *ENS Rennes, Rennes, FRANCE.*

2017 **Agrégation of mathematics**, *ENS Rennes, Rennes, FRANCE, The agrégation is a competitive examination for civil service in the French public education system.*

2017-2018 **Pre-doctoral position**, *University of de Rennes 1, Rennes, FRANCE.*

2018-2021 **PHD**, *University of Rennes 1, Rennes, PhD Advisors : David BOURQUI et Julien SEBAG.*

Defended on December 7, 2020

Awards

October 2020 **L'Oréal-UNESCO For Women in Science, Young Talent France Award**, *Translation of Prix Jeunes Talents L'Oréal-UNESCO pour les femmes et la science.*

July 2020 **Distinguished Paper talk, ISSAC 2020 (Conférence).**

Research themes

Algebraic geometry, *Study of the arc scheme.*

Differential algebra.

Tropical geometry, *Tropical differential geometry.*

Publications

2020 **The Fundamental Theorem of Tropical Partial Differential Algebraic Geometry**, *S. Falkensteiner and C. Garay-López and M.H and M-P. Noordman and Z. Toghani and F. Boulier, ISSAC 2020 , [Distinguished Paper talk](#).*

2020 **On the nilpotent functions at a non-degenerate arc**, *D. Bourqui and M.H, Manuscripta Mathematica.*

2020 **Non-Complete Completions**, *M.H, World Sci. Publ., Arc Schemes and Singularities. Proceedings*

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🌐 <http://perso.eleves.ens-rennes.fr/people/Mercedes.Haiech/>

Pre-publications

- * **On Initials and the Fundamental Theorem of Tropical Partial Differential Geometry**, *S. Falkensteiner and C. Garay-López and M.H and M-P. Noordman and F. Boulier and Z. Toghani.*
- * **Deformations of solutions of differential equations**, *M.H.*

International Conferences (speaker)

- 2017 **More Invariants from Arc Spaces**, *Versailles, FRANCE, 25-29 September.*
- 2018 **Arcs, differential algebraic geometry and singularities**, *Seville, SPAIN, 11-14 September.*
- 2019 **Tropical Differential Algebra Workshop**, *London, UK, 3-7 December.*
- 2021 **Rencontres doctorales Lebesgue**, *FRANCE -Video-conference-, 1-3 March.*

Seminar (speaker)

- 2021 **Seminar of Théorie Algorithmique des Nombres**, *Bordeaux, FRANCE, 26 January.*
- 2021 **Seminario AC/GA**, *CIMAT, MEXICO, 8 February.*
- 2021 **Topologie, Géométrie et Algèbre**, *Nantes, FRANCE, 18 February.*
- 2021 **Algebraic geometry and number theory seminar**, *IST, AUSTRIA, 22 April.*
- 2021 **Seminar of Géométrie et d'algèbre effectives**, *IRMAR, Rennes, FRANCE, 14 May.*
- 2021 **Seminar Limousin de Calcul Formel**, *XLIM, Limoges, FRANCE, 10 June.*

Responsibilities

- Since 2020 **Representative of the PHD students of the IRMAR's concil.**
- 2019-2020 **Co-organizer of the doctoral student seminar in algebra and geometry.**
- 2019-2021 **In charge of a research and training group (GRF), Culture Maths, IREM.**

Skills

English Fluent
L^AT_EX

German Scholar
SAGE

Teaching

- 2018-2021 **Teaching**, *64 hours per year, ENS Rennes.*
- 2017 **Teaching**, *30 hours, ENS Rennes, TD de théorie des groupes.*

Science popularization

- 2014-2020 **French tournament for young mathematicians (TFJM²)**, *Help with the national organization between 2014 and 2016, initiator of the regional tournament in Rennes in 2015, then help with the regional organization in Rennes between 2015 and 2020.*, Translation of *Tournoi français des jeunes mathématiciens et mathématiciennes*.
- 2016 **International Tournament of Young Mathematician (ITYM)**, *Supervision of a team of high school students during their participation in the tournament in Sofia, Bulgaria..*
- 2019 **Rendez-vous for young female mathematicians (RJM)**, *Speaker and intervener at the Rennes RJM*, Translation of *Rendez-vous des jeunes mathématiciennes*.
- 2019 **Internship for secondary school students (MathC2+)**, *Supervision students during MathC2+*, ENS Rennes.
- 2018/2020 **Girls and Math Days : a luminous equation**, *Speaker at the girls and maths days in 2018 and 2020*, Rennes, FRANCE, Translation of *Journée filles et Maths*.
- 2018-2020 **Science Festival**, *Exponent at the Science Festival in 2018 and 2019 and 2020*, Rennes, FRANCE, Translation of *Fête de la science*.