

# Tom Ferragut

*Postdoctorant*

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## Research activity

### Positions

- 01/22 – **Postdoctorat**, University of Fribourg.  
today Working with **Enrico Le Donne**
- 07/22 – **JSPS post-doc fellowship**, Kyoto University.  
10/22 Working with **Ryokichi Tanaka**

### Ph.D (2018 – 2022)

**Title** **Geometry of horospherical products**  
**Advisers** Jérémie Brieussel & Constantin Vernicos  
**Institution** Institut Montpelliérain Alexander Grothendieck (IMAG)

### Internships

- 2018 **About the separation profiles of graphs**, University of Montpellier.  
Under the supervision of **Jérémie Brieussel**.
- 2016 **The Hurwitz existence problem for a given branched data**, University of Pisa.  
Under the supervision of **Carlo Petronio**.
- 2015 **Optimisation of a recommendation algorithm**, INRIA, Rennes.  
Under the supervision of **Anne-Marie Kermarrec**.

## Publications

- 2022 **Geometric rigidity of quasi-isometries in horospherical products**, *University of Montpellier*.  
(Preprint: [arXiv:2211.04093](https://arxiv.org/abs/2211.04093))
- 2020 **Geodesics and Visual boundary of Horospherical Products**, *University of Montpellier*.  
(Preprint: [arXiv:2009.04698](https://arxiv.org/abs/2009.04698))
- 2018 **Elementary solution of an infinite sequence of instances of the Hurwitz problem**, *With Carlo Petronio, University of Pisa*.  
*Rendiconti Lincei Matematica E Applicazioni* 29(2) : 297-307. ([arXiv: 1805.00305](https://arxiv.org/abs/1805.00305))

## Education

### Diploma

- 2017 – 2018 **University of Montpellier.**  
- Master degree in Fundamental Mathematics
- 2014 – 2018 **ENS Rennes.**  
- Mathematics departement
- 2014 – 2017 **University of Rennes 1.**  
- Master degree in Mathematics  
- Bachelor degree in Mathematics

## Talks

- March 2023 **Graduate student Seminar, Université de Bern.**  
What if the shortest path was not the straight line ?
- March 2023 **Oberseminar Geometrie, Université de Fribourg.**  
Geometry and rigidity of quasi-isometries of horospherical products.
- February 2023 **Lightning Talk YGGT XI, University of Münster.**  
Geometry and quasi-isometry rigidity of horospherical products.
- February 2023 **Séminaire groupes et analyse, Université de Neuchâtel.**  
Quasi-isometry classification of solvable Lie groups constructed as Carnot type horospherical products.
- January 2023 **Geometric Group Seminar, University of Münster.**  
Rigidity of quasi-isometries and geometry of horospherical products.
- Decembre 2022 **Topics in Geometric Analysis II (Fall2022), EPFL.**  
Geometry and rigidity of quasi-isometries of horospherical products.
- Decembre 2022 **Special Seminar, Université de Fribourg.**  
Geometry and rigidity of quasi-isometries of horospherical products.
- October 2022 **Differential Topology Seminar, Kyoto university, Kyoto.**  
Geometry and quasi-isometry rigidity of horospherical products.
- April 2022 **Geometry and Topology Seminar, Bowling Green University, Ohio.**  
Sol type groups' quasi-isometries.
- November 2021 **Rencontre des jeunes chercheuses et jeunes chercheurs du GDR Platon, CIRM, Marseille.**  
Geodesics and Visual Boundary of Horospherical products.
- January 2021 **Strukturtheorie Seminar, Institut für Diskrete Mathematik, Graz.**  
"Geodesics and Visual Boundary of Horospherical products"
- January 2021 **Séminaire Darboux, University of Montpellier.**  
"Geodesics and Visual Boundary of Horospherical products"
- March 2020 **Dynamics and Group Geometry Early Researchers Seminar (DAGGER), University of Warwick.**  
"Horospherical products of Gromov hyperbolic spaces"
- March 2020 **Bristol Junior Geometry Seminar (BRIJGES), University of Bristol.**  
"Horospherical products of Gromov hyperbolic spaces"

March 2020 **Junior Topology and Group Theory Seminar**, *University of Oxford*.  
"Horospherical products of Gromov hyperbolic spaces"

February 2020 **Journée des doctorant.e.s**, *University of Montpellier*.  
"What if the shortest path wasn't a straight line ?"

## Responsibilities and Teaching experiences

2019 – 2020 Organiser of the Ph.D students seminars of the University of Montpellier.

2022 Tutorials (60h) - Arithmetic (Year 1)

2021 Tutorials (20h) - Arithmetic (Year 2)

2019 – 2021 Tutorials (108h) - Mathematics for Biology (Year 1)

2021 Tutorials (25h) - Linear Algebra (Year 1)

2020 Tutorials (32h) - Linear Algebra (Year 2)

2019 Tutorials (21h) - Statistics for Biology (Year 2)

2019 Tutorials (21h) - Mathematics for Chemistry (Year 1)

2019 CESPROMA project (32h) - Mathematics support courses for first year students (Year 1)

2018 Tutorials (32h) - Linear Algebra and Group Theory (Year 3)

## Languages

French Native language

English Advanced