

Jérémy Dousselin

PhD student at the IECL

Nancy

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26 years old

<https://jdousselin.pages.math.cnrs.fr/>

Research interests

Analytic number theory, mollification method, L -functions and their zeros, class numbers, sieve theory, character sums, exponential sums, complex analysis.

Formation and degrees

- 2021 – 2025 **PhD student**, *IECL*, Nancy, Preparation of a PhD thesis "Zéros de combinaisons linéaires de fonctions L sur la droite critique", PhD advisor: Youness Lamzouri.
- 2020 – 2021 **Third Master's degree**, *Université de Lorraine*, Nancy, Master of pure mathematics, Master's thesis advisor: Youness Lamzouri.
- 2017 – 2021 **Second Master's degree**, *ENS de Lyon*, Lyon, The *École Normale Supérieure de Lyon's* school-leaving certificate also is a Master's degree.
- 2020 **Agrégation externe**, *Académie de Lyon*, Lyon, Most competitive French examination for civil service in the public education, Ranked 47 out of 1409 candidates.
- 2019 – 2020 **First Master's degree**, *ENS de Lyon*, Lyon, Master of mathematics education
- 2017 – 2018 **Bachelor's degree**, *ENS de Lyon*, Lyon, Bachelor of mathematics.
- 2014 – 2017 **Classe Préparatoire**, *Lycée Marcelin Berthelot*, St-Maur-des-Fossés, Intense preparatory courses for enrolment in one of the French *grandes écoles*, School-leaving certificate with the best mention out of four.

Publications

Articles

- 2024 *Complex moments of class numbers with fundamental unit restrictions*, **In preparation**.
- 2023 *Zeros of linear combinations of Dirichlet L -functions on the critical line*, **Pre-published**.
[arXiv:2311.10285v2](https://arxiv.org/abs/2311.10285v2) [math.NT]
- On abelian cubic fields with large class number*, **To be published in Proceedings of the AMS**.
[arXiv:2303.05890](https://arxiv.org/abs/2303.05890) [math.NT]
- 2021 *Vérifier l'hypothèse de Riemann : la méthode d'Alan Turing*, **Journal de Mathématiques de l'École**, Hors-série Goutelas 2019, *ENS de Lyon*, p71-78.
<https://jmeenslyon.files.wordpress.com/2021/11/journal.pdf>

Book

- 2022 *Quelques éléments de mathématiques*, **Self-published**.
https://jdousselin.pages.math.cnrs.fr/_enseignement/quelques-elements-de-mathematiques.pdf

Talks

Speaker

- 2024 **Dynamique, Arithmétique, Combinatoire seminar**, *I2M*, Marseille
Collaborative Research Group L -functions in Analytic Number Theory, *Online*, Vancouver
RTAEN, *IHP*, Paris
- 2023 **Weekly analytic number theory seminar**, *IECL*, Nancy
- 2022 **PhD students' seminar**, *IECL*, Nancy

Auditor

- 2023 **Journées arithmétiques**, *Nancy*
- 2021 **Analytic number theory summer school**, *Paris*

Teachings

Teaching assistant

- 2024 **Numerical Analysis**, *ENSEM*, Nancy, Teacher: Blaise Colle
2021 – 2024 **Euclidean geometry**, *Université de Lorraine*, Nancy, Teacher: Wolfgang Bertram
2021 – 2023 **Mathematics for engineers**, *ENSEM*, Nancy, Teacher: Khalid Koufany

Instructor

- 2021 – 2024 **An introduction to \LaTeX** , *Université de Lorraine*, Nancy

Examiner

- 2023 **Math examiner**, *Fac de sciences*, Nancy
Jury for the TFJM^2 , *IRMA*, Strasbourg.
2019 – 2020 **Math examiner in CPES**, *ENS de Lyon*, Lyon

Languages

- English C1, passed the Cambridge Advanced Exam in 2019 (scored 202 out of 210).
French Native.

Administrative, scientific and teaching duties

- 2024 **Referee**, *Bulletin of the Australian Mathematical Society*.
Referee, *Acta Arithmetica*.
- 2023 – 2024 **Co-organisator of the number theory team's weekly seminar**, *IECL*, Nancy.
Co-supervisor of a team for the TFJM^2 , *Lycée Jeanne d'Arc*, Nancy.
Nominated PhD student to the "formation working group", *Université de Lorraine*, Nancy, Each of the 8 doctoral schools sends one representative to this working group, whose goal is to improve the doctoral formation system in place at the Université de Lorraine.
- 2022 – 2024 **Elected math PhD student at the doctoral school**, *IAEM*, Nancy.
Elected doctoral school's representative at the doctoral college, *Université de Lorraine*, Nancy.
Co-creator and co-organisator of a weekly math club, *Lycée Jeanne d'Arc*, Nancy.
- 2023 **Internship advisor**, *IECL*, Nancy, I supervised a 3 weeks "initiation to research" internship for two high-school students. One had to deal with Perron's formula and asymptotic estimates, and the other studied linear and quadratic equations modulo n , and in particular had to prove the quadratic reciprocity theorem.
- 2018 – 2019 **Tutor for the association *Trait d'union***, *ENS de Lyon*, Lyon.