

Post-Doctoral Associate  
Division of Science and Mathematics  
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# Quentin Ehret

My webpage: <https://qehret.github.io/Quentin-Ehret-Webpage/>

## Academic Positions

- October 2023 - **Post-doctoral researcher**, Supervisor: Sofiane Bouarroudj
- September 2026 Division of Sciences and Mathematics, New York University Abu Dhabi (United Arab Emirates)
- October 2020 - **PhD Student**, Supervisor: Abdenacer Makhlouf
- September 2023 Institut de Recherche en Informatique, Mathématiques, Automatique et Signal (IRIMAS), Université de Haute-Alsace, Mulhouse (France)

## Education

- February 2024 **Qualification aux fonctions de Maître de Conférences**, *French national scientific qualification as Associate Professor, Section 25 (Mathematics)*
- October 2020 - **PhD in Mathematics**, *Study and Deformations of Lie-Rinehart (Super)algebras in Positive Characteristic*, Supervisor: Abdenacer Makhlouf
- September 2023 Institut de Recherche en Informatique, Mathématiques, Automatique et Signal (IRIMAS), Université de Haute-Alsace, Mulhouse (France)
- 2019 - 2020 **Master's Degree in Science and Technology**, *Topology, Algebra and Representations*  
UFR de Mathématique et d'Informatique, Strasbourg (France)
- 2019 **Agrégation of Mathematics**, *Competitive French secondary-school and university teaching degree*
- 2017 - 2019 **Master's Degree in Science and Technology**, *Higher Education Teaching*  
UFR de Mathématique et d'Informatique, Strasbourg (France)
- 2016 - 2017 **Bachelor's Degree in Science and Technology**, *Mathematics*  
UFR de Mathématique et d'Informatique, Strasbourg (France)
- 2014 - 2016 **Preparatory Class**, *Mathematics, Physics and Engineering (MPSI-MP)*  
Lycée Kléber, Strasbourg (France)

## Grants

- November 2024 **Post Doctoral Associate Conference Travel Grant**, NYUAD Graduate and Post-Doctoral Programs, 1000 US\$.

## Preprints

- Preprint 11. **Q. Ehret**, *On Poisson superalgebras in characteristic 2*, arXiv:2512.06680, December 2025, submitted
- Preprint 10. **S. Bouarroudj, Q. Ehret, A. Makhlouf, N. Shyntas**, *The Superization of Hochschild's Lemma and Restricted Lie-Rinehart Superalgebras*, arXiv:2511.18372, November 2025, submitted
- Preprint 9. **S. Bouarroudj, Q. Ehret, J. Liu**, *Cohomology of restricted Poisson algebras in characteristic 2*, arXiv:2504.07601, April 2025, submitted

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## Publications

- Journal paper 8. **Q. Ehret, N. Gilliers**, *Jacobson identities for post-Lie algebras in positive characteristic*, arXiv:2504.14540, April 2025, to appear in Journal of Algebra and Its Applications.
- Journal paper 7. **S. Benayadi, S. Bouarroudj, Q. Ehret**, *Left-symmetric superalgebras and Lagrangian extensions of Lie superalgebras in characteristic 2*, Journal of Pure and Applied Algebra **229** (2025), no. 11, Paper No. 108086, 43 pp.  
<https://doi.org/10.1016/j.jpaa.2025.108086>
- Journal paper 6. **Q. Ehret**, *An alternative approach to deformations of restricted Lie-Rinehart algebras*, Communications in Algebra, **54** (2), 505–524.  
<https://doi.org/10.1080/00927872.2025.2527218>
- Journal paper 5. **Q. Ehret, A. Makhlouf**, *Cohomology and deformations of restricted Lie algebras and their morphisms in positive characteristic*, Advances in Pure and Applied Mathematics 2025, vol. 16, n° 3, 26–73  
<https://doi.org/10.21494/ISTE.OP.2025.1316>
- Journal paper 4. **S. Bouarroudj, Q. Ehret**, *Central extensions of restricted Lie superalgebras and classification of  $p$ -nilpotent Lie superalgebras in dimension 4*, arXiv:2401.08313, January 2024  
**To appear** in Journal of Algebra and Its Applications (2026),  
<https://doi.org/10.1142/S0219498826500659>
- Journal paper 3. **S. Bouarroudj, Q. Ehret**, *Double extensions of quasi-Frobenius Lie superalgebras with degenerate center*, Communications in Algebra, Vol. **53** (5), 1739–1754, (2025)  
<https://doi.org/10.1080/00927872.2024.2421408>
- Journal paper 2. **S. Bouarroudj, Q. Ehret, Y. Maeda**, *Symplectic double extensions for restricted quasi-Frobenius Lie (super)algebras*, SIGMA **19** (2023), 070, 29 pages  
<https://doi.org/10.3842/sigma.2023.070>
- Journal paper 1. **Q. Ehret, A. Makhlouf**, *On classification and deformations of Lie-Rinehart superalgebras*, Communications in Mathematics **30** (2022), no. 2, 67–92.  
<https://doi.org/10.46298/cm.10537>

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## Conferences and Workshops with Talks

- January 2026 **Conference**, *OMC Winter Mathematics Research International Workshop on Lie Algebras and related topics*, Sultan Qaboos University, Muscat (Oman)  
Talk: The Superization of Hochschild’s Lemma and Restricted Lie-Rinehart Superalgebras
- September 2025 **Conference**, *X International Workshop on Non-Associative Algebras*, Bourgogne Europe University, Dijon (France)  
Talk: Lagrangian extensions of Lie superalgebras in characteristic 2
- September 2025 **Conference**, *China-Central Asia Algebraic Conference 2025*, Almaty (Kazakhstan)  
Talk: Restricted Poisson algebras in characteristic 2
- June 2025 **Conference**, *Workshop on algebras and applications in mathematical physics*, Chern Institute, Nankai University, Tianjin (China)  
Talk: Restricted Poisson algebras in characteristic 2
- December 2024 **Conference**, *6th Euro-Maghreb Conference in Algebra, Geometry and Lie Theory*, Hammamet (Tunisia)  
Talk: Lagrangian extensions of Lie superalgebras in characteristic 2
- November 2024 **Conference**, *Non-associative algebras, representations and applications International Conference*, SUSTech, International Center for Mathematics, Shenzhen (China)  
Talk: Central extensions of restricted Lie superalgebras and classification of  $p$ -nilpotent Lie superalgebras in dimension 4
- July 2024 **Conference**, *MAThEOR Days 2*, Sainte-Marie-aux-Mines (France)  
Talk: Central extensions of nilpotent Lie superalgebras
- February 2024 **Conference**, *VII International Workshop on Non-Associative Algebras*, University of Salento, Lecce (Italy)  
Talk: Central extensions of restricted Lie superalgebras and classification of  $p$ -nilpotent Lie superalgebras in dimension 4

- June 2023 **Short communication**, *PhD Students Day 2023*, Université de Haute-Alsace, Mulhouse (France)  
Talk: Study and deformations of Lie-Rinehart (super)algebras in positive characteristic
- April 2023 **Conference**, *Euro-Maghreb Conference in Algebra, Geometry and Lie Theory*, Sousse (Tunisia)  
Talk: Symplectic double extensions for restricted quasi-Frobenius Lie (super)algebras
- October 2022 **Conference**, *IV International Workshop on Non-Associative Algebras*, University of Beira Interior, Covilhã (Portugal)  
Talk: Deformations of Lie-Rinehart (super)algebras
- September 2022 **Conference**, *New Trends in Hopf Algebras and Monoidal Categories*, University of Torino (Italy)  
Talk: Lie-Rinehart (super)algebras
- June 2022 **Conference**, *Conference of differential geometry, contact geometry, dynamical systems and beyond, in memory of Robert Lutz*, IRIMAS, Département de Mathématiques, Mulhouse (France)  
Talk: Lie-Rinehart (super)algebras
- November 2021 **Poster**, *Research School Higher Structures Emerging from Renormalisation*, Erwin Schrödinger Institute, Vienna (Austria)  
Poster: On classification and deformations of Lie-Rinehart superalgebras
- November 2021 **Talk in a workshop**, *Optimal Transport Workshop*, Université de Haute-Alsace, Mulhouse (France)  
Talk: Birkhoff theorem and optimal transport
- May 2021 **Talk in a workshop**, *K-Theory Workshop*, Institut de Recherche Mathématique Avancée, Strasbourg (France)  
Talk: About the Grothendieck group  $K_0$

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## Seminars

- February 2025 **Seminar**, *NYUAD Math Post-Doc Seminar*, New York University Abu Dhabi (United Arab Emirates)  
Talk: On Lie superalgebras in characteristic  $p = 2$
- January 2025 **Seminar**, *ART Seminar*, Institut de Recherche Mathématique Avancée, Strasbourg (France)  
Talk: Central extensions of restricted Lie superalgebras and classification of  $p$ -nilpotent Lie superalgebras in dimension 4
- April 2024 **Seminar**, *NYUAD Math Post-Doc Day*, New York University Abu Dhabi (United Arab Emirates)  
Talk: Restricted Lie algebras in characteristic  $p = 2$
- March 2024 **Seminar**, IRIMAS, Département de Mathématiques, Mulhouse (France)  
Talk: Central extensions of restricted Lie superalgebras and classification of  $p$ -nilpotent Lie superalgebras in dimension 4
- January 2024 **Seminar**, *GTP Seminar*, New York University Abu Dhabi (United Arab Emirates)  
Talk: Central extensions of restricted Lie superalgebras and classification of  $p$ -nilpotent Lie superalgebras in dimension 4
- March 2023 **PhD Seminar**, *PhD seminar of the IRMA Institute*, Institut de Recherche Mathématique Avancée, Strasbourg (France)  
Talk: Restricted structures on the Heisenberg algebra
- January 2023 **PhD Seminar**, *PhD seminar of the IRIMAS Institute*, IRIMAS, Mulhouse (France)  
Talk: Algebraic structures emerging from genetic inheritance
- December 2022 **Seminar**, Institute of Mathematics and Statistics of Tartu (Estonia)  
Talk: Chevalley–Eilenberg cohomology and deformations of Lie algebras in positive characteristic
- March 2022 **Seminar**, IRIMAS, Département de Mathématiques, Mulhouse (France)  
Talk: Cohomology and deformations of restricted Lie algebras in positive characteristic

February 2022 **PhD Seminar**, *PhD seminar of the IRMA Institute*, Institut de Recherche Mathématique Avancée, Strasbourg (France)  
Talk: A survey about deformations of Lie algebras

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## Attended Conferences and Research Schools (without talks)

- April 2025 **Conference**, *UAE Math Day*, Annual meeting of the mathematicians of the UAE, University of Sharjah, United Arab Emirates
- February 2025 **Conference**, *Conference on Lie Theory and related Topics*, (Organizer)  
New York University Abu Dhabi, United Arab Emirates
- June 2024 **Conference**, *Conference on Algebra and Deformations*, in honor of Abdenacer Makhlouf for his 60<sup>th</sup> birthday, (Organizer)  
Université de Haute-Alsace, France
- March 2024 **Conference**, *UAE Math Day*, Annual meeting of the mathematicians of the UAE, (Organizer)  
New York University Abu Dhabi, United Arab Emirates
- November 2023 **Conference**, *SICMS23*, Sharjah International Conference on Mathematical Sciences  
University of Sharjah, United Arab Emirates
- June 2023 **Conference**, *MAThEOR Days*, Annual meeting of the PhD Students of Region Alsace and surroundings, (Organizer)  
Sewen, France
- April 2023 **Research School**, *Higher Structures in Geometry and Mathematical Physics*  
Centre International de Rencontres Mathématiques (CIRM), Luminy (France)
- December 2022 - **Workshop**, *Associators, Categories and Multizetas values*  
July 2023 IRIMAS, Mulhouse (France)
- November 2022 **Conference**, *GDR Renormalisation Annual Meeting 2022 : Hopf Algebras and Applications*  
Université du Littoral Côte d'Opale, Calais (France)
- July 2022 **Conference**, *Hopf algebras, monoidal categories and related topics*  
Simion Stoilow Institute of Mathematics of the Romanian Academy, Bucharest (Romania)
- November 2021 **Research School**, *Higher Structures Emerging from Renormalisation*  
Erwin Schrödinger Institute, Vienna (Austria)
- September 2021 **Conference**, *Mathematics without Borders: The Centennial of the International Mathematical Union*  
Strasbourg (France)
- June 2021 **Research School**, *Symplectic Structures in Mathematics and Applications to Control Theory (remotely)*  
Hassan II University, Casablanca (Morocco)

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## Teaching

- Spring 2026 **Recitations, Algebra 1**, (Groups Theory), 10h.  
New York University Abu Dhabi (United Arab Emirates)
- Summer 2025 **Occasional replacements in Multivariable Calculus**, 6h.  
New York University Abu Dhabi (United Arab Emirates)
- Spring 2025 **Recitations, Algebra 1**, (Groups Theory), 10h.  
New York University Abu Dhabi (United Arab Emirates)
- Fall 2024 **Occasional replacements in Calculus**, 5h.  
New York University Abu Dhabi (United Arab Emirates)
- Spring 2024 **Recitations, Algebra 2**, (Rings, Fields, Galois Theory), 10h.  
New York University Abu Dhabi (United Arab Emirates)
- Spring 2021-2022-2023 **Lectures, Linear Algebra and Geometry**, 28h each year, First year of Engineering School ENSCMU and ENSISA.  
Université de Haute-Alsace, Mulhouse (France)

- Spring 2021-2022-2023 **Lectures, Real Analysis**, 16h each year, First year of Engineering School ENSISA. Université de Haute-Alsace, Mulhouse (France)
- Fall 2020-2021-2022 **Lectures, Numerical Analysis**, 20h each year, Second Year of Engineering School ENSISA. Université de Haute-Alsace, Mulhouse (France)

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## Other activities, popular science and scientific dissemination

- June 2025 **Popular Science**, *Career : mathematician, from Mulhouse to Abu Dhabi*, Math C2+ internship, short talk (in French) aimed at high school students  
Université de Haute-Alsace, Mulhouse (France)
- February 2025 **Member of an Organizing Committee**, *Conference on Lie Theory and Related Topics*  
New-York University, Abu Dhabi (United Arab Emirates)
- Since September 2024 **Member of an Organizing Committee**, *Post-Doc Seminar*, Semimonthly seminar of the Math Post-Docs at NYUAD  
New-York University, Abu Dhabi (United Arab Emirates)
- July 2024 **Member of an Organizing Committee**, *MAThEOR Days 2*, Conference of PhD students and young researchers of Alsace and surroundings  
Université de Haute-Alsace and Université de Strasbourg (France)
- June 2024 **Member of an Organizing Committee**, *Conference of Algebra and Deformations*  
Université de Haute-Alsace, Mulhouse (France)
- March 2024 **Member of an Organizing Committee**, *Math Day 2024*, Annual meeting of mathematicians of the UAE  
New-York University, Abu Dhabi (United Arab Emirates)
- June 2023 **Main Organizer**, *MAThEOR Days*, Conference of PhD students and young researchers of Alsace and surroundings  
Université de Haute-Alsace and Université de Strasbourg (France)
- November 2022 **Popular Science**, *Conference on Magic Squares and Optimal Transport*  
Université de Haute-Alsace, Mulhouse (France)
- June 2022 **Member of an Organizing Committee**, *Conference of Differential Geometry, Contact Geometry, Dynamical Systems and beyond*, in memory of Robert Lutz  
Université de Haute-Alsace, Mulhouse (France)
- March 2022 **Popular Science**, *Math workshop in a Primary School*, (2h)  
Ecole primaire d'Uffholtz (France)
- September 2021 - September 2023 **Elected Representative**, for doctoral students of the University of Haute-Alsace on the board of the Doctoral School, ED 269 (MSII)  
Mulhouse and Strasbourg (France)
- 2021-2022 **Popular Science**, *Math workshop in High School*, MATh.en.JEANS, (6 months)  
Lycée Scheurer-Kestner, Thann (France)

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## Miscellaneous

- Languages **French (Mother tongue), English (professional and colloquial), German (Intermediate), Arabic (basic notions)**
- Programming **L<sup>A</sup>T<sub>E</sub>X, Python, Mathematica, html, Microsoft tools**

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## References

- Abdenacer Makhoulf**, *PhD Thesis supervisor*, University of Haute-Alsace, France, [abdenacer.makhoulf@uha.fr](mailto:abdenacer.makhoulf@uha.fr)
- Sofiane Bouarroudj**, *Post-doc supervisor*, New York University Abu Dhabi, United Arab Emirates, [sofiane.bouarroudj@nyu.edu](mailto:sofiane.bouarroudj@nyu.edu)
- Martin Bordemann**, *President of the PhD Committee*, University of Haute-Alsace, France, [martin.bordemann@uha.fr](mailto:martin.bordemann@uha.fr)

**Saïd Benayadi**, *Collaborator*, University of Lorraine, France  
said.benayadi@univ-lorraine.fr

**Vyacheslav Futorny**, *Colleague*, Shenzhen International Center for Mathematics,  
SUSTech, China, vfutorny@gmail.com