

# Thibault JUILLARD

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🌐 <https://www.imo.universite-paris-saclay.fr/fr/perso/thibault-juillard/>

## General information

Birth date     📅 The 12th of December, 1996.  
Nationality     📅 French.  
ORCID     📅 <https://orcid.org/0000-0001-9071-0409>

## Employment History

Since 07/2025     📅 **Postdoc, Universität Hamburg**, Department of Mathematics, Germany.  
Mentor: Sven Möller.  
10/2024 – 06/2025     📅 **Teacher and researcher, École polytechnique**, Centre de Mathématiques Laurent Schwartz, Palaiseau, France.  
Temporary position during the last year of my Ph.D.  
02/2022 – 09/2024     📅 **Ph.D. student, Université Paris-Saclay**, Institut de mathématiques d'Orsay, France.

## Education

02/2022 – 06/2025     📅 **Ph.D. Mathematics, Université Paris-Saclay**, Orsay, France.  
Supervisor: Anne Moreau.  
Thesis title: *Reduction by stages for affine  $W$ -algebras and applications*.  
Date of defence: the 13th of June, 2025.  
09/2020 – 01/2022     📅 **M.Sc. Mathematics, École polytechnique fédérale de Lausanne**, Switzerland.  
Thesis title: *Nilpotent orbits, Slodowy slices and BRST cohomology*.  
08/2017 – 08/2021     📅 **M.Sc. Mathematics, École polytechnique**, Palaiseau, France.

## Research Publications

### Journal Articles

- 1     N. Genra and T. Juillard, “Reduction by stages for affine  $W$ -algebras,” 2025, Preprint.
- 2     N. Genra and T. Juillard, “Reduction by stages for finite  $W$ -algebras,” *Mathematische Zeitschrift*, vol. 308, no. 1, p. 15, 2024.

## Talks

### Conferences

- 06/2025     📅 *Reduction by stages, a geometric approach*. Conference “Representation Theory XIX”, IUC, Dubrovnik, Croatia.
- 06/2024     📅 *Reduction by stages for  $W$ -algebras*. Conference “Vertex algebras, geometric representation theory and quantum groups”, CIRM, Luminy, France.
- 📅 *Chiralisation of reduction by stages*. Conference “Groups and their actions”, Levico Terme, Italy.

## Talks (continued)

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- 01/2024  *Reduction by stages for W-algebras.* Winter school in mathematical physics, Les Diablerets, Switzerland.
- 10/2022  *Reduction by stages for finite W-algebras.* Workshop “Quantum symmetries”, Centre de recherche en mathématiques, Montréal, Canada.

## Seminars

- 05/2025  *Reduction by stages for affine W-algebras, a geometric approach.* Algebraic geometry seminar, Université de Lille, France.
- 01/2025  *Reduction by stages for affine W-algebras, a geometric approach.* Representation theory seminar, I2M, Luminy, France.
- 12/2024  *Reduction by stages for affine W-algebras, a geometric approach.* Mathematical physics seminar, Hamburg, Germany.
- 11/2024  *Reduction by stages: from Slodowy slices to affine W-algebras.* Seminar “Groups, representations and geometry”, Paris Cité, France.
- 10/2024  *Reduction by stages for affine W-algebras.* Algebra and representation theory seminar, Tor Vergata, Rome, Italy.
- 03/2024  *Reduction by stages for W-algebras.* Seminar “AGATA”, Montpellier, France.
- 01/2024  *Reduction by stages for W-algebras.* Algebra seminar, ICJ, Lyon, France.

## Reading groups

- 01/2025  *Symplectic geometry and characteristic variety.* Reading group “D-modules”, IMO, Orsay, France.
- 03/2024  *Examples of GIT constructions: quiver varieties.* Reading group “Good moduli stacks”, IMO, Orsay, France.
- 02/2024  *Equivariant sheaves and linearisations in GIT.* Reading group “Good moduli stacks”, IMO, Orsay, France.
- 11/2023  *Geometric Invariant Theory.* Reading group “Good moduli stacks”, IMO, Orsay, France.
- 04/2023  *Double Poisson vertex algebras.* Workshop “Hall algebras and vertex algebras in enumerative geometry”, Skye, Scotland.
- 01/2023  *Character variety and tautological classes.* Reading group “ $P = W$  Conjecture”, IMO, Orsay, France.

## Grants

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- 06/2025  *Vivaldi program.* Travel grant.  
Funding institution: Fondation Mathématique Jacques Hadamard.  
Host institution: IUC, Dubrovnik, Croatia.
- 06/2024  *Vivaldi program.* Travel grant.  
Funding institution: Fondation Mathématique Jacques Hadamard.  
Host institution: CIRM, Luminy, France.
- 06/2023  *Vivaldi program.* Travel grant.  
Funding institution: Fondation Mathématique Jacques Hadamard.  
Host institution: IUC, Dubrovnik, Croatia.

## Grants (continued)

- 10/2022     *Program for junior scientific visibility*. Travel grant.  
Funding institution: Fondation Mathématique Jacques Hadamard.  
Host institution: CRM, Montréal, France.

## Teaching

### Exercises

- 2024 – 2025     *Euclidean and Hermitian spaces*, Bachelor 2, Polytechnique, Paris, France.
- 2023 – 2025     *Differential geometry*, Bachelor 3, Polytechnique, Paris, France.
- 2022 – 2023     *Series of functions, differential equations*, Bachelor 2, Polytechnique, Paris, France.
- 2021     *Geometry*, Bachelor 2, EPFL, Lausanne, Switzerland.
-  *Linear algebra 1*, Bachelor 1, EPFL, Lausanne, Switzerland.
-  *Analysis 1*, Bachelor 1, EPFL, Lausanne, Switzerland.

## Mobility

- 10/2022     Thematic program “Quantum symmetries”. CRM, Montréal, Canada.  
Duration: 4 weeks.
- 03/2022 – 04/2022     Thematic program “Vertex and Chiral Algebras”. IMPA, Rio de Janeiro, Brasil.  
Duration: 6 weeks.

## Mathematical interests

- Representation theory**     Simple Lie algebras, vertex algebras, W-algebras, homological algebra, quantisation.
- Algebraic geometry**     Poisson geometry, algebraic groups, geometric invariant theory, Slodowy slices, nilpotent orbits.

## Miscellaneous Experience

### Event organisation

- 09/2023 – 01/2025     **RéGA**, IHP, Paris, France.  
Seminar for young researchers in algebraic geometry.
- 09/2022 – 10/2023     **Popularisation seminar**, IMO, Orsay, France.  
Ph.D. student seminar.

### Popularisation

- 08/2024     **APEX-Maths**, Resita, Romania.  
3-week program to initiate high school students to mathematical research.
- July, 2021 – 2024     **Astromaths**, Ardèche, France.  
2-week science camp in mathematics and astronomy for high school students.