Thibault JUILLARD

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🌐 https://thibjrd.github.io/

General information

Birth date	🔖	The 12th of December, 1996.
Nationality	🔖	French.
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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	🔖	**Doctoral researcher, 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.* Defended on 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,** Palaisseau, France.

Research Publications

Journal Articles

1 N. Genra and T. Juillard, "Reduction by stages for affine W-algebras," 2025, Preprint. 🔗 URL: https://arxiv.org/abs/2501.04501.

2 N. Genra and T. Juillard, "Reduction by stages for finite W-algebras," *Mathematische Zeitschrift*, vol. 308, no. 1, p. 15, 2024. 🔗 URL: https://link.springer.com/article/10.1007/s00209-024-03567-9.

Thesis

1 T. Juillard, "Reduction by stages for W-algebras and applications," Ph.D. thesis, Université Paris-Saclay, 2025. 🔗 URL: https://theses.hal.science/tel-05149024.

Talks

Conferences

10/2025	🔖	*Reduction by stages for affine W-algebras.* Conference "Collaborations in algebra, representation theory and ethics", École normale supérieure, Lyon, France.

Talks (continued)

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.

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.* Worshop "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

06/2025   *Vivaldi program.* Travel grant.
Funding institution: Fondation Mathématique Jacques Hadamard.
Host institution: IUC, Dubrovnik, Croatia.

Grants (continued)

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.

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

Teaching

Supervision of exercise sessions

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.

2020   ▌ *Group theory,* Bachelor 2, 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.

Miscellaneous Experience (continued)

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.