

Dimitri Wyss

EPFL
Station 8
1015 Lausanne
✉ dimitri.wyss@epfl.ch
📄 <https://www.epfl.ch/labs/arg>

Education and Employment

- Since 2019 **Tenure track assistant professor**, *EPF Lausanne*.
- 2018 - 2019 **Postdoctoral position**, with *François Loeser*, Paris 6.
- 2017 - 2018 **Postdoctoral fellow of the Fondation Sciences Mathématiques de Paris**, with *François Loeser*, Paris 6.
- 2013 - 2017 **Ph.D thesis in Algebraic Geometry**, under the direction of *Tamás Hausel*, EPF Lausanne and IST Austria.
- 2012 - 2013 **Master thesis**, under the direction of *Aravind Asok* and *Brent Doran*, USC Los Angeles.
- 2011 - 2012 **Master in Mathematics**, *ETH Zurich*.
- 2008 - 2011 **Bachelor in Mathematics**, *ETH Zurich*.

Works

- 2021 **BPS-invariants from p -adic integrals (with F. Carocci and G. Orecchia)**, *arXiv:2112.12103*.
Motivic integration on the Hitchin fibration (with François Loeser), *Algebraic Geometry*, *arXiv:1912.11638*, 2021. vol 8, no 2, p. 196-230.
- 2020 **Geometric stabilization via p -adic integration (with Michael Groechening and Paul Ziegler)**, *Journal of the AMS*, *arXiv:1810.06739*, 2020, vol. 33, no 3, p. 807-873..
Mirror symmetry for moduli spaces of Higgs bundles via p -adic integration (with Michael Groechening and Paul Ziegler), *Inventiones Mathematicae*, 2020, vol. 221, no 2, p. 505-596..
- 2018 **Arithmetic and metric aspects of open de Rham spaces (with Tamás Hausel and Michael Wong)**, *submitted*, *arXiv:1807.04057*.
- 2017 **Motivic and p -adic localization phenomena**, *Thesis*, *arXiv:1709.06769*.
- 2016 **Motivic classes of Nakajima quiver varieties**, *International Mathematics Research Notices*, 2016, vol. 2017, no 22, p. 6961–6976.

Talks

- 2022 **BPS-invariants from non-archimedean integrals**, *Workshop in Arithmetic Geometry*, Rome.
BPS-invariants from non-archimedean integrals, *Mirrors, Moduli and M-Theory in the Midlands*, LMS-Meeting, Birmingham.
Applications of the orbifold measure, *Summer school on motivic integration*, Heinrich Heine University, Düsseldorf.
- 2021 **Geometric applications of p -adic integration**, *Cohomology of moduli spaces of flat connections*, SwissMAP Research Station.
DT-invariants from non-archimedean integrals, *Harvard/MIT algebraic geometry seminar*.
DT-invariants from non-archimedean integrals, *Workshop Non-Archimedean and Tropical Geometry*, Goethe University Frankfurt / École Polytechnique.

- 2020 ***p*-adic integration, geometry and Higgs bundles**, *Algebraic Geometry and number theory seminar*, IST Austria.
- 2019 **Non-archimedean and motivic integrals on the Hitchin fibration**, *Géométrie et Théorie des Modèles*, Ecole Normale Supérieure.
- p*-adic integration and geometric stabilization**, *Number Theory Seminar*, Princeton University/Institute of Advanced Study.
- p*-adic integration and geometric stabilization**, *Automorphic Forms and Arithmetic*, Columbia University, New York.
- 2018 ***p*-adic integration and geometric stabilization**, *Arithmetic Geometry and de Rham Theory*, Vietnam Academy of Science and Technology, Hanoi.
- p*-adic integration and geometric stabilization**, *Geometric Langlands Seminar*, University of Chicago.
- Open de Rham spaces and the purity conjecture for wild character varieties**, *Geometric Representation Theory Seminar*, Fields Institute, Toronto.
- 2017 **Mirror symmetry for moduli spaces of Higgs bundles via *p*-adic integration**, *Séminaire Groupes, Représentations et Géométrie*, Université Paris Diderot, Paris.
- p*-adic integration along the Hitchin fibration**, *Séminaire Arithmétique et Géométrie Algébrique*, Université Paris-Sud, Orsay.
- Topological mirror symmetry via *p*-adic integration**, *SWAGP 2017*, SISSA, Trieste.
- 2016 **Motivic classes of Nakajima quiver varieties**, *Workshop on Hall Algebras, Enumerative Invariants and Gauge Theories*, Fields Institute, Toronto.
- Algebraic Duistermaat-Heckman phenomena, 17. CUSO graduate colloquium**, UniFr, Fribourg.
- Motivic classes of Nakajima quiver varieties**, *MAGIC seminar*, Imperial college, London.
- 2015 **Prime numbers in complex geometry, 15. CUSO graduate colloquium**, UniBe, Bern.
- 2014 **Half way from point counting to integration**, *Poster session at GAeL XXII*, SISSA, Trieste.
- Betti numbers of birational Calaby-Yau varieties**, *Geometry working seminar*, EPFL, Lausanne.
- The Noether problem**, *Graduate seminar*, EPFL, Lausanne.

Conferences and other scientific activities

- 2022 **Workshop in Arithmetic Geometry**, Rome.
- Mirrors, Moduli and M-Theory in the Midlands**, *LMS-Meeting*, Birmingham.
- Summer school on motivic integration**, *Heinrich Heine University*, Düsseldorf.
- 2021 **Cohomology of moduli spaces of flat connections**, *SwissMAP research station*, Les Diablerets.
- Workshop Non-Archimedean and Tropical Geometry**, *Goethe University Frankfurt / École Polytechnique*.
- 2020 **Quiver varieties, character varieties and DT-invariants**, *Institut Henri Poincaré*, Paris.
- 2019 **L-functions and Geometric Representation Theory**, *Nisyros*.
- Moduli Spaces, Representation Theory and Quantization**, *Research Institute for Mathematical Sciences*, Kyoto University.
- Geometric representation theory, topological field theory, and low-dimensional topology**, *International Centre for Mathematical Sciences*, Edinburgh.
- 2018 **Arithmetic Geometry and de Rham Theory**, *Vietnam Academy of Science and Technology*, Hanoi.
- Mini-School on *p*-adic and motivic integration**, *University of Geneva*.

- Conference on Model Theory and Applications, *Institut Henri Poincaré*, Paris.
- 2017 **SWAGP 2017**, *SISSA*, Trieste.
- 2016 **Research in pairs**, with *Michael Groechening and Paul Ziegler*, MFO, Oberwolfach.
- Workshop on Hall algebras, enumerative invariants and gauge theories**, *Fields Institute*, Toronto.
- Enumerative geometry of moduli spaces of sheaves in low dimension**, *EPFL*, Lausanne.
- 2015 **Young researchers in singularities**, *CIRM*, Marseille.
- 2014 **Workshop on motivic integration, orbital integrals and zeta-functions**, *International research station*, Banff.
- Géométrie algébrique en liberté XXII**, *SISSA*, Trieste.

Teaching

- Spring 2022 ***p*-adic numbers and applications**, *MA2 course*, EPFL.
Algebraic curves, *BA6 course*, EPFL.
Géométrie pour GC, *BA2 service course*, EPFL.
- Fall 2021 **Introduction to geometric representation theory**, *PhD course*, EPFL.
- Spring 2021 ***p*-adic numbers and applications**, *MA2 course*, EPFL.
Algebraic curves, *BA6 course*, EPFL.
Géométrie pour GC, *BA2 service course*, EPFL.
- Spring 2020 ***p*-adic numbers and applications**, *MA2 course*, EPFL.
- Spring 2016 **Algebraic geometry by Tamás Hausel**, *Main assistant*, EPFL.
- Fall 2015 **Geometry I by Philippe Michel**, *Teaching assistant*, EPFL.
- Spring 2015 **Algebraic geometry by Tamás Hausel**, *Main assistant*, EPFL.
- Fall 2013 - **Geometry I and II by Marc Troyanov**, *Teaching assistant*, EPFL.
Fall 2014
- 2009 - 2013 **Teaching assistant for linear algebra and complex geometry**, *ETHZ*.

Grants and Awards

- 2021-2025 **SNF Project Grant 'Arithmetic aspects of moduli spaces on curves' (700K)**.
- 2018 **EPFL Prize in Mathematics**, *for outstanding thesis*.
- 2017 **Postdoctoral Laureat of the Fondation Sciences Mathématiques de Paris**.
- 2014 **Willi Studer Prize**, *for best Masters degree*, ETHZ.
- 2008 **Honourable mention at the International Mathematical Olympiad (IMO)**.
- 2008 **Winner of the Swiss Mathematical Olympiad (SMO)**.

Extracurricular activities

- 2021 **Coordinator for the Franch-speaking math olympiad (online)**.
- 2016 - 2017 **Head of the problem selection committee for the European girls mathematical olympiad 2017**.
- 2013 - 2016 **President of the SMO**.
- 2012 **Main organizer of the middle European mathematical olympiad**.
- 2008 - 2013 **Organization and problem selection for the SMO**.
- 2007-2008 **Member of the Swiss team for the IMO**.

Languages

German Mother tongue

English	Fluent
French	Fluent
Greek	Basic