Arithmetica Transalpina

5th meeting, Friday 17.10.2025
UniDistance, Schinerstrasse 18, 3900 Brig

9.15: *Optional social event – guided tour of Stockalper Palace*
(meet 9.10 at Hotel Stockalperhof lobby)

From 10.45: *Refreshments*

11.15: *Welcome*

11.30–12.30: **Wieslawa Niziol**, *Duality in p-adic pro-étale cohomology of analytic spaces*

12.30–14.00: *lunch*

14.00-15.00: **Andrew Graham**, *Exceptional zeros for GL(3)*

15.00–15.30: *break*

15.30–16.30: **Andreas Langer**, *Overconvergent prismatic and Hodge–Tate cohomology*

16.30-16.45: *break*

16.45–17.45: **Pierre Colmez**, *A locally analytic approach to the p-adic local Langlands correspondence for* $GL_2(\mathbf{Q}_p)$

18.00 onwards: drinks reception at Alte Simplonstrasse 20

19.30: dinner at Schlosskeller

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Abstracts

Wieslawa Niziol, *Duality in p-adic pro-étale cohomology of analytic spaces*

I will discuss duality theorems in p-adic pro-étale cohomology of partially proper rigid analytic spaces. I will present some examples plus sketch a proof of the main duality isomorphism. This is joint work with Pierre Colmez and Sally Gilles.

Andrew Graham, *Exceptional zeros for GL(3)*

I will describe joint work with D. Barrera Salazar and C. Williams in which we prove cases of the Greenberg–Benois exceptional zero conjecture for cuspidal automorphic representations of GL(3), without any self-duality assumptions. The key ingredients are an automorphic exceptional zero formula (using Gehrmann's L-invariants), and local-global compatibility at p for Hida families.

Andreas Langer, *Overconvergent prismatic and Hodge–Tate cohomology*

I will give an overconvergent version of prisms and prismatic cohomology which was defined by Bhatt and Scholze and explain how overconvergent prismatic cohomology compares with rigid, etale and de Rham cohomology in various situations. Using ideas of Bhatt and Lurie I will also describe a stacky approach to compute overconvergent Hodge-Tate cohomology.

Pierre Colmez, *A locally analytic approach to the p-adic local Langlands correspondence for $GL_2(\mathbf{Q}_p)$*

I will explain how to construct the p-adic local Langlands correspondence for $GL_2(\mathbf{Q}_p)$ starting from the locally analytic one, using (ϕ, Γ)-modules over the Robba ring. This is joint work with Joaquin Rodrigues Jacinto.