

**The P=W Conjecture in Non Abelian Hodge Theory**  
**30 September-4 October 2024**  
**L3**

**Schedule**

**Monday 30 September**

- 9:30-10:30 Anton Mellit, *Cohomology rings of character varieties*  
10:30-11:00 Coffee  
11:00-12:00 Siqing Zhang, *What happens in positive characteristic?*  
12:00-14:00 Lunch  
14:00-15:00 Junliang Shen, *Tautological classes, perverse filtration, and Fourier transform*  
15:00-15:30 Coffee  
15:30-16:30 Olga Trapeznikova, *Decomposition of the parabolic map to the moduli of semistable bundles: the topology of the fibers and the intersection forms*

**Tuesday 1 October**

- 9:30-10:30 Olivier Schiffmann, *Cohomological Hall algebras of Higgs bundles on curves, BPS algebras and cuspidal functions*  
10:30-11:00 Coffee  
11:00-12:00 Victoria Hoskins, *Higgs moduli spaces with abelian motives and applications*  
12:00-14:00 Lunch  
14:00-15:00 Emmanuel Letellier, *PGL<sub>n</sub>-character varieties and Langlands duality over finite fields*  
15:00-15:30 Coffee  
15:30-16:30 Andrew Harder, *Perversity, weight, and mirror symmetry*

**Wednesday, 2 October – Clay Research Conference, L1**

- 10:00-11:00 Ana Caraiani, *The cohomology of Shimura varieties - a survey of recent developments*  
11:00-11:30 Coffee  
11:30-12:30 Mark Andrea De Cataldo, *The P=W Conjecture in Non Abelian Hodge Theory*  
12:30-14:00 Lunch  
14:00-15:00 Timothy Gowers, *Some recent developments in combinatorics*  
15:00-15:30 Coffee  
15:30-16:30 Rahul Pandharipande, *Cycles on the moduli space of abelian varieties*  
16:30-17:30 Chandrashekar Khare, *The work of James Newton and Jack Thorne*  
Philippe Michel, *The work of Paul Nelson*  
Presentation of the 2024 Clay Research Awards  
17:30-19:00 Reception in the Mathematical Institute  
19:00 Dinner for invited guests, Exeter College

**Thursday 3 October**

- 9:30-10:30 Fernando Rodriguez Villegas, *Tensor product multiplicities for GL<sub>n</sub> and U<sub>n</sub> over finite fields*  
10:30-11:00 Coffee  
11:00-12:00 Camilla Felisetti, *Intersection cohomology of moduli of rank 2 vector bundles*  
12:00-14:00 Lunch  
14:00-15:00 Ben Davison, *The stacky nonabelian Hodge correspondence*  
15:00-15:30 Coffee  
15:30-16:30 Andres Fernandez Herrero, *Decomposition theorem for the logarithmic Hitchin fibration*

## Friday 4 October

- 9:30-10:30 Tony Pantev, *Classifying abstract Higgs bundles*  
10:30-11:00 Coffee  
11:00-12:00 Tasuki Kinjo, *Cohomological Hall induction for (-1)-shifted symplectic stacks*  
12:00-14:00 Lunch  
14:00-15:00 Zili Zhang, *The  $P=W$  phenomenon for cluster varieties*  
15:00-15:30 Coffee  
15:30-16:30 Qizheng Yin, *A Beauville decomposition for the Hitchin system*