

## Shimura Varieties and Modularity (2/3)

*Tuesday, July 26, 2022 3:00 PM (1 hour)*

We describe the Calegari-Geraghty method for proving modularity lifting theorems beyond the classical setting of the Taylor-Wiles method. We discuss the three conjectures that this method relies on (existence of Galois representations, local-global compatibility and vanishing of cohomology outside a certain range of degrees) and their current status, and then explain the commutative algebra underlying the method.

### Summary

**Presenters:** Prof. CARAIANI, Ana (Imperial College); Prof. SHIN, Sug Woo (UC Berkeley)