

Local ϖ -isomorphisms for (φ, Γ) -modules in mixed characteristic

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Given a representation of $\text{Gal}_{\mathbb{Q}_p}$ with coefficients in a p -adically complete local ring R , Fukaya and Kato have conjectured the existence of a canonical trivialization of the determinant of a certain cohomology complex. Nakamura extended this conjecture to the setting of (φ, Γ) -modules over the Robba ring, and proved it in the rank-1 and trianguline settings. I will discuss how to extend these trivializations to certain trianguline families in mixed characteristic.

This is joint work in progress with Ashwin Iyengar.