ℓ-adic Perverse Sheaves...or Not

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Abstract: So-called étale cohomology theories (in complex or ℓ-adic flavors) are used in complex differential equations, D-modules, representations of Lie algebras, and number theory.

To introduce them we first replace a "normal" topology with a Grothendieck topology. Then we discuss the difficulties in working with ℓ-adic numbers as coefficients for cohomology. Thirdly, we narrow down the complexes by introducing a perversity (especially, the middle perversity). If time permits, the speaker will connect his interest in the subject with his background in mathematical physics and differential equations.