

Exposé du jeudi 22 mars 2012

**FAMILIES OF TORIC EXPONENTIAL SUMS, SYMMETRIC POWER
L-FUNCTIONS, UNIT ROOT FORMULAS.**

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Résumé : Associated with families of toric sums are L -functions constructed from symmetric powers (or tensor powers, or exterior powers) of the Frobenius map at each of the fibers. Similarly, unit-root L -functions and other related L -functions may be constructed from distinguished subsets of the collection of eigenvalues at each fiber. We construct relative p -adic cohomology for some general families, with p -adic estimates for the relative Frobenius map. We are then able to derive some properties of these L -functions concerning their degree (when they are rational functions), estimates for the p -divisibility of the reciprocal zeros and poles of the associated L -functions, and analytic formulas for the unit roots when these are unique. The results are joint works with Haessig and with Adolphson.

¹Les jeudis matin, de 10 h 30 à 11 h 30, salle 004, IRMAR (bâtiment 22), Université de Rennes 1, Campus de Beaulieu