LUIS LOMELI, Instituto de Matemáticas PUCV

Asai cube L-functions and the local Langlands correspondence

(Joint with Guy Henniart). Let F be a non-Archimedean locally compact field, and let E be a cubic separable extension of F. Let $\mathbf{H}$ be a simply connected quasi-split semisimple group over F of type D_4, with triality corresponding to E, and let $\mathbf{L}$ be its Levi subgroup with derived group $\mathrm{Res}_{E/F}\mathrm{SL}_2$. To any irreducible smooth generic representation π of $\mathrm{GL}_2(E)$, the Langlands-Shahidi method applied to $(\mathbf{H}, \mathbf{L})$ attaches an Asai cube L-function and related local factors. If σ is the Weil-Deligne representation corresponding to π via the Langlands correspondence, we prove that Asai cube local factors for π are the local factors for the Weil-Deligne representation obtained from σ via tensor induction from E to F. A consequence is that Asai cube γ- and ε-factors become stable under twists by highly ramified characters.