

On a conjecture of Casselman and Shahidi

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The Generalized Injectivity Conjecture of Casselman-Shahidi states that the unique irreducible generic subquotient of a (generic) standard module is necessarily a subrepresentation. It is a conjecture in the theory of representation of reductive groups over local fields, but has large ramifications to number theory (L functions as studied by Shahidi). It was proven for classical groups ($\mathrm{SO}(2n + 1)$, Sp_{2n} , $\mathrm{SO}(2n)$) by M.Hanzer in 2010. In my work, I have proven it for a large class of reductive connected groups (including some exceptional groups) such that a certain root system (deduced from that of the group) is of type A, B, C, or D. In this talk, I will first explain some motivations for this conjecture and further the architecture and key ideas used in the proof.