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Shrawan Kumar* (kumar@math.unc.edu), Department of Mathematics, UNC at Chapel Hill, Chapel Hill, NC 27599-3250. *A conjectural presentation of fusion algebras*. Preliminary report.

This is a joint work with Arzu Boysal. Let G be a compact connected and simply-connected Lie group and let $R(G)$ be its representation ring. For any positive integer k , let $R(G;k)$ denote the fusion ring of G at level k . Then, $R(G;k)$ is a quotient of $R(G)$. Let $I(G;k)$ be the kernel. Generalizing some results of Gepner, we give a conjectural presentation of this ideal for classical groups as well as for the exceptional group G_2 . (Received January 13, 2009)