ON STATISTIC OF IRREDUCIBLE COMPONENTS

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For finite dimensional representations $V_1, \dots, V_m$ of a simple finite dimensional Lie algebra $\mathfrak{g}$ consider the tensor product $W = \otimes_{I=1}^{m} V_i^{\otimes N_i}$. The first result, which will be presented in the talk, is the asymptotic of the multiplicity of an irreducible representation V_λ with the highest weight λ is this tensor product when $N_i = \tau_i/\epsilon, \lambda = \xi/\epsilon$ and $\epsilon \to 0$. Then we will discuss the asymptotical distribution of irreducible components with respect to the character probability measure $Prob(\lambda) = \frac{m_\lambda \chi_{V_\lambda}(e^t)}{\chi_W(e^t)}$. Here $\chi_V(e^t)$ is the character of representation V evaluated on e^t where t is an element of the Cartan subalgebra of the split real form of the Lie algebra $\mathfrak{g}$. This is a joint work with O. Postnova.