

**Alexei Petukhov:** Annihilators of highest weight modules of  $U(sl(\infty))$ ,  $U(so(\infty))$ ,  $U(sp(\infty))$ .

**Abstract:** I will explain how to compute the associated varieties of highest weight modules in classical Lie algebras  $sl(n)$ ,  $so(n)$ ,  $sp(2n)$  (this algorithm should be considered as "known for more than 20 years" but I don't know any article or book in which it is written down explicitly without an essential reference on the other book or article). Then we will discuss what this statement implies for the annihilators of highest weight modules of  $U(sl(\infty))$ ,  $U(so(\infty))$ ,  $U(sp(\infty))$ .