Geometric interpretation of boson type realizations for $\widehat{\mathfrak{sl}}_n$.

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In this talk we give a geometric interpretation of several boson type realizations for the affine Lie algebras $\widehat{\mathfrak{sl}}_n$, such as the Wakimoto and imaginary Verma ones. We first show in more detail how these realizations turn up in connection with completions of the appropriate Weyl algebra for $\widehat{\mathfrak{sl}}_2$ and then discuss the general case. This is based on our ongoing work with Ben Cox and Vyacheslav Futorny.