Basic representations of affine Lie algebras and theory of Chevalley groups

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Basic representation of affine Lie algebras when restricted to finite dimensional simple subalgebra gives a model of all irreducible finite dimensional representations. Thanks to its elementary nature the basic representation is very useful in various classical problems of simple Lie algebras and Chevalley groups (and we discussed this with Kolya). We recall a construction of the basic representation and present some new developments of this construction that have a potential of further applications to classical theory.

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