962-17-13 **Igor B. Frenkel*** (frenkel-igor@yale.edu), Yale University, Department of Mathematics, 10 Hillhouse Avenue, P.O. Box 208283, New Haven, Connecticut 06520-8283. *From Platonic solids to affine Lie algebras and beyond.*

We will review the history of the affine Lie algebras and their relations with different areas of mathematics and mathematical physics in the past century. Then we will present a recent construction of the affine Lie algebras from representation theory of finite subgroups of SU(2). We will show that Platonic solids appear as the key ingredient of this construction. We will conclude with perspectives of the affine Lie algebras and their new emerging connections to the next layer of structures in mathematics and physics. (Received May 17, 2000)