1011-16-216 **Birge Huisgen-Zimmermann*** (`birge@math.ucsb.edu`), Department of Mathematics, University of California, Santa Barbara, CA 93106. *Classifying finite dimensional representations with squarefree tops.*

Let A be a finite dimensional algebra over an algebraically closed field. We explain in intuitive terms what it means to classify a collection of finite dimensional representations by way of a fine or coarse moduli space (in the sense of Mumford). Then we answer the following question: When do the representations with fixed dimension and fixed squarefree top permit such a fine or coarse classification? In case the answer is positive, what do the corresponding moduli spaces look like, and how can they be accessed by way of quiver and relations of A? (Received August 27, 2005)