1009-17-146 **Bojko Bakalov*** (bojko_bakalov@ncsu.edu), Department of Mathematics, North Carolina State University, Box 8205, Raleigh, NC 27695, **Alessandro D'Andrea**, Dipartimento di Matematica, Istituto "Guido Castelnuovo", Universita di Roma "La Sapienza", 00185 Rome, Italy, and **Victor G. Kac**, Department of Mathematics, MIT, Cambridge, MA 02139. *Representations of the Lie Pseudoalgebra $W(\mathfrak{d})$.*

One of the algebraic structures that has emerged recently in the study of the operator product expansions of chiral fields in conformal field theory is that of a Lie conformal algebra. A Lie pseudoalgebra is a generalization of the notion of a Lie conformal algebra for which $\mathbb{C}[\partial]$ is replaced by the universal enveloping algebra $U(\mathfrak{d})$ of a finite-dimensional Lie algebra $\mathfrak{d}$. One can construct a simple Lie pseudoalgebra $W(\mathfrak{d})$, which is closely related to the Lie–Cartan algebra $W_N$ of vector fields, where $N = \dim \mathfrak{d}$. Our main result is the classification of all irreducible finite $W(\mathfrak{d})$-modules. (Received August 14, 2005)