ICM 1998, Berlin, Aug. 18–27

Abstracts of Plenary and Invited Lectures

Section:

7. Lie Groups and Lie Algebras

1991 MS Classification: 17B65, 17B67, 81R10
Minoru Wakimoto, Kyushu University, Japan
Representation theory of affine superalgebras at the critical level

As is known well, the representation theory of affine Lie algebras have a number of important connection with various area of mathematics and physics, while the representation of superalgebras still remain quite mysterious, and only a few has been known about it because of a serious technical and intrinsic difficulties arising in its analysis.
The subject seems quite interesting and fascinating, since the associated Macdonald identities are of different kinds from those of usual affine Lie algebras, and also the Ramanujan's famous mock theta functions take place closely related to the denominator identities for certain affine superalgebras.
In this talk, I will explain an approach to the representation theory of superalgebras and, in particular, some of interesting features of representations of affine superalgebras at the critical level so far revealed and expected.