

Recently, it was shown that half BPS Supergravity solution of theories with $SU(2|4)$ symmetry algebra is given uniformly by a single function D which obeys three dimensional continuous Toda equation. In this paper, we study the scale invariant solution of Toda equation. Our motivation is that all solution of half BPS sector of IIB supergravity, as one expects from the fermion description of the theory, can be written using rational coordinates. By defining two auxiliary functions we prove that such solutions obey cubic algebraic equation. We obtain the some simplest solutions of Toda equation and especially, we observe that the PP-wave solution can be written in this fashion.