

**Meeting:** 1003, Atlanta, Georgia, SS 37A, AMS Special Session on In the Wake of Jacobi and Hamilton 200 Years Later, I

1003-34-1575      **Maria-Clara Nucci\*** (nucci@unipg.it), Dipartimento di Matematica e Informatica, Università di Perugia, 06123 Perugia, Italy. *A Lie symmetry connection between Jacobi modular equation and Schwarzian differential equation.*

We have applied Lie group analysis to Jacobi modular equation and found that it admits a six dimensional Lie symmetry algebra, the same Lie algebra admitted by Schwarzian differential equation. This means that Jacobi modular equation can be transformed into Schwarzian equation. It is noteworthy that the symmetry operators are given in terms of Jacobi elliptic functions. We show other differential equations which admit Lie symmetries in terms of special functions. (Received October 06, 2004)