



**THE LANE-EMDEN EQUATION: SYMMETRIES AND  
CONSERVED QUANTITIES**

Faranak Ghahari Kermani and Nematollah Riazi

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**Abstract**

After a brief review of the origin and history of the Lane-Emden equation, we use the prolongation method to find Lie symmetries of this equation and use them to find constant integrals by means of Noether theorem.

**Keywords and phrases:** the Lane-Emden equation, prolongation method, Lie symmetries, Noether theorem.

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