

# Lie Series Technique, Ordinary Differential Equations and Dynamical Integration

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The Lie series technique is applied to solve a class of nonlinear differential equations. We show that it includes also the dynamical integration technique. Differential equations with chaotic behaviour are also considered with this technique. Finally first integrals and the Lie series technique is discussed.

*Key words:* Differential Equations; Lie Series Technique; First Integrals.