

MAFIA - seminář, který se neodmítá

## **Lie symmetries and the group classification problem of differential equations**

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**Abstract:** After a brief review of the basic notions and properties of Lie symmetries of differential equations, the statement of group classification problem is given. Some modern techniques of solving the group classification problem are discussed.

References:

[1] P. J. Olver, Applications of Lie groups to differential equations, 2nd ed., Springer-Verlag, New York, 1993.

[2] O. Vaneeva, R. O. Popovych and C. Sophocleous, Extended group analysis of variable coefficient reaction-diffusion equations with exponential nonlinearities, J. Math. Anal. Appl. 396 (2012) 225-242.

[3] O. Vaneeva, Lie symmetries and exact solutions of variable coefficient mKdV equations: an equivalence based approach, Commun. Nonlinear Sci. Numer. Simulat. 17 (2012) 611-618.