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Subject

Differential equations

Submitted to

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Application of ODE'S

- ① Newton's law of cooling.
- ② Beam
- ③ Physical application
- ④ Radioactive elements.
- ⑤ Electrical circuits.
- ⑥ Modelling free mechanical oscillations.
- ⑦ No Damping.
- ⑧ Light Damping.
- ⑨ Heavy Damping
- ⑩ Modelling forced mechanical oscillation
- ⑪ Computer exercise & activity.
- ⑫ Modelling with first order equation.

There are several major methods for the solution of PDE

- 1) Separation of variables.
- 2) Method of characteristics
- 3) Integral transforms
- 4) Superposition principle.
- 5) Change of variables.
- 6) Lie group method.
- 7) Semianalytical method as well as various numerical methods.

Application of PDE Partial differential equations.

In many engineering or science problems, such as heat transfer, electricity, quantum mechanics, water flow and others the problems are governed by partial differential equations. By nature this type of problem is much more complicated than the previous ordinary differential equation.