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## Hands on Workshop- Symmetry Analysis of Differential Equations

*Wednesday, 23 July 2025 08:30 (8 hours)*

At the end of this workshop, participants will be able to

- ☒ Understand what is meant by the invariance of a differential equation
- ☒ Understand the concept of group transformations
- ☒ Derive infinitesimal transformations of the Lie group of transformations
- ☒ Determine Lie point symmetries of ordinary differential equations
- ☒ Use the derived Lie point symmetries to integrate ordinary differential equations
- ☒ Determine Lie point symmetries of Partial differential equations
- ☒ Use the derived Lie point symmetries of partial differential equations to determine similarity solutions which are then used to reduce partial differential equations to ordinary differential equations

**Presenter:** Dr FAREO, Gideon (University of the Witwatersrand, Johannesburg, South Africa)