ME 3001 Lecture, Roots of Non-Linear Equations
A Finite Difference Approch - The Secant Method

- **What does secant mean?**

- **The Newton-Raphson method is not** *purely numerical*, **why?**
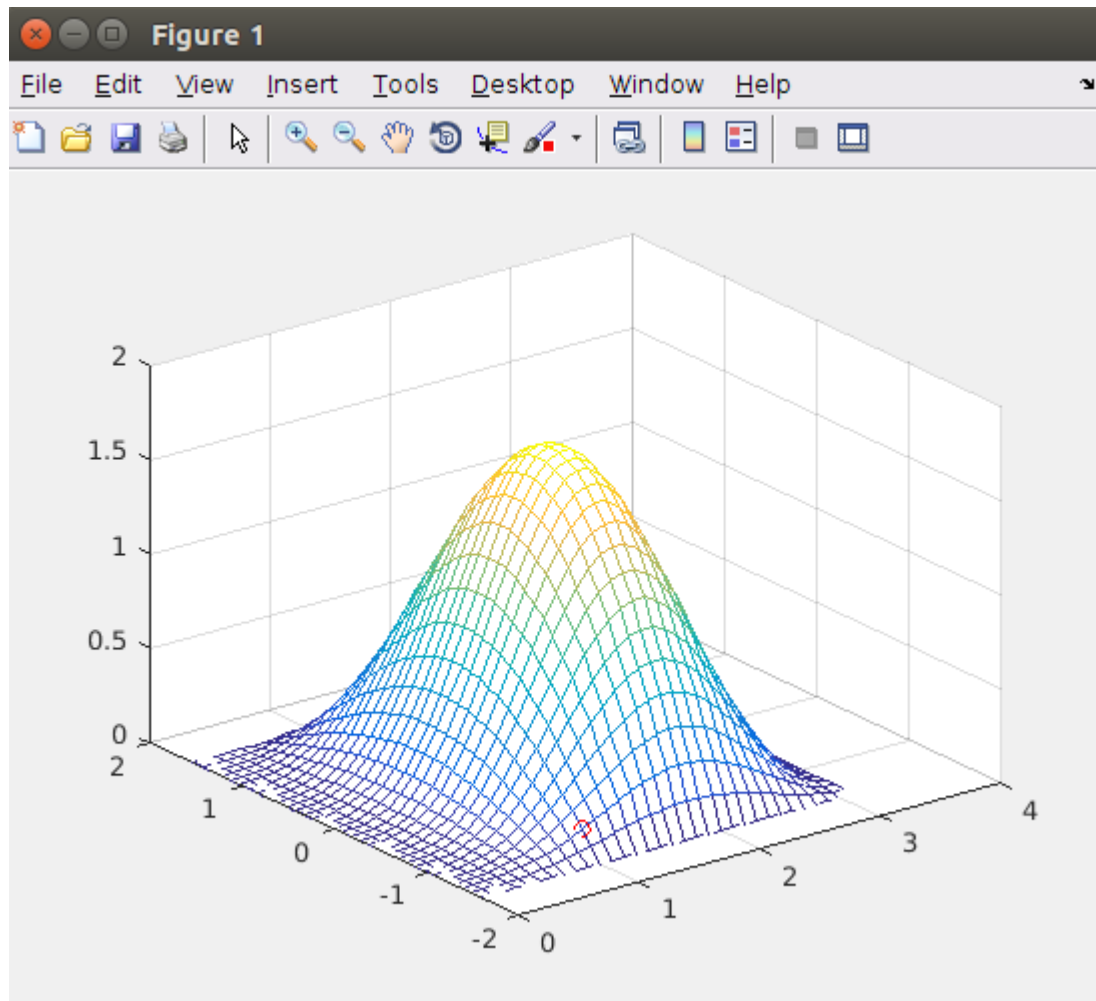
    – The Equation

    – The Derivation

- **Root finding and Optimzation?**

  – Using the derivative

  – Constraints

- **Optimzation Techniques**

  – Brute Force

  – Steepest Accent

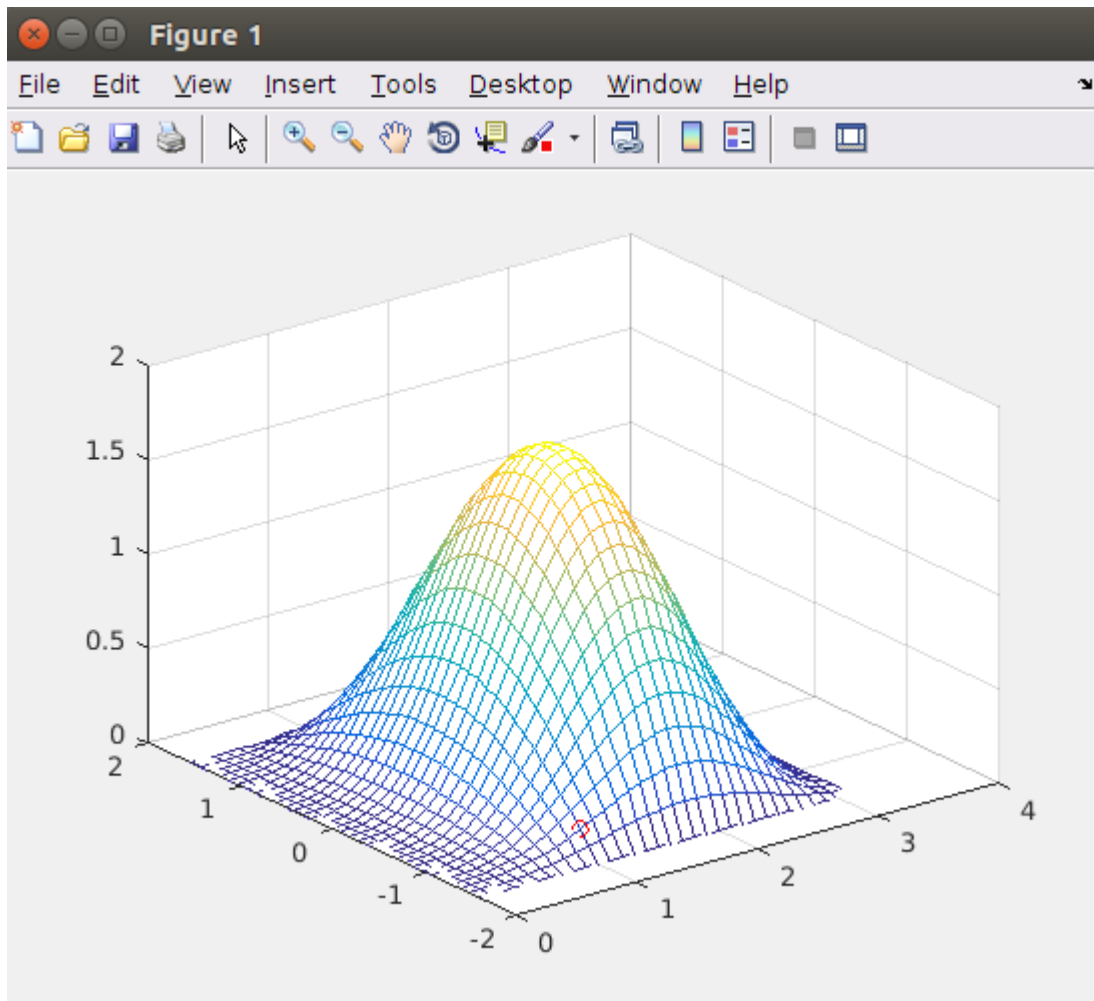# A brief introduction to Optimization

- **What is Optimization ?**
  - Find Local Minima and Maxima

  - Constraints

- **Root finding and Optimzation?**
  - Using the derivative

  - Constraints

- **Optimzation Techniques**

  – Brute Force

  – Steepest Accent

REMINDERS

- Homework was due Friday (11:59 PM)

- MATLAB script from today's lecture will be posted on ilearn.