



## Introduction to Numerical Analysis

### 1. Introduction

- 1.1 Numerical Analysis.
- 1.2 Simple Mathematical Model.
- 1.3 Approximations and Errors.
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- 2.1 The Bisection Method.
- 2.2 Newton-Raphson Method.
- 2.3 Secant Method.
- 2.4 False Position Method.
- 2.5 Fixed Point Method.
- 2.6 Zeros of Polynomials.

### References:

1. **“Numerical Methods for Engineers and Scientists Using MATLAB”**, Ramin S. Esfandiari, CRC Press (Taylor & Francis Group), 2<sup>nd</sup> edition, 2017.
2. **“Numerical Analysis”**, Richard. L. Burden, J. Douglas. Faires and Annette M. Burden, Brooks/Cole, Cengage Learning, 10<sup>th</sup> edition, 2016.
3. **“Programming with MATLAB for Scientists: A beginner’s Introduction”**, Eugeny E. Mikhailov, CRC Press (Taylor & Francis Group), 2017.