Introduction to Scientific Computing with Mathematica

Using the Wolfram Language and Mathematica for Scientific Computing

A new webinar series in Arabic - Scientific Computing with Mathematica - has just been scheduled in March and April for anyone to learn the key ideas behind scientific computing from linear algebra, differential equations and mathematical optimization. With the aid of the powerful computational engine provided by Wolfram Language, you can easily learn and combine ideas of scientific computing without the additional overhead of learning many numerical and graphical libraries. Because Egypt is currently holding a country-wide Mathematica License, you are invited to join any of the three sessions for free! Places are limited, please register soon with your information provided in English.

Sessions:

- Linear Algebra on 29 March - You will learn how to create and solve linear systems/eigenvalue problems and compute basic matrix factorizations like SVD.
- Ordinary Differential Equations(ODEs) on 7 April - You will learn how to write, solve and visualize solutions to ODEs. You will also learn how to specify different types of boundary conditions and use options to control the numerical accuracy of the solution or select different numerical methods to solve ODEs.
- Partial Differential Equations(PDEs) on 19 April - You'll learn how to solve analytically and numerically boundary value problems for classical PDEs in science and engineering: Laplace, Heat, and Wave Equations.
- Optimization on 5 May - You will learn how to solve unconstrained and constrained optimization problems. You will also learn how to solve large linear programming problems and explore the recent functionality for the more general convex optimization problems.