

1106-VE-75

Razvan Alexandru Mezei* (razvan.mezei@lr.edu), LRU 7416, Hickory, NC 28603. *Using SAGE Mathematics software in Numerical Analysis courses. It's Free and Easy.*

SAGE is a Mathematical Software that is increasingly being used in several areas of Mathematics and Engineering, such as Linear Algebra, Calculus, Number Theory, Cryptography, Numerical Computation, Group theory, Combinatorics, Graph Theory, and others.

It is a free alternative to Mathematica, Maple, and MATLAB, and it is Python based. Even if the your students don't have any Python background, you should not worry too much: it is one of the easiest programming language to learn.

Students can use a web-based version of SAGE, also called a SAGE Cell server (for example <http://sagecell.sagemath.org>), or they can download and use it on their own machines. The SAGE Cloud (<http://cloud.sagemath.com>) is yet another great way to use SAGE, that provides, among others, an environment where students can perform computations, write LaTeX documents, save and share their work, and collaborate with others.

In this presentation, I plan to share some of the tricks and techniques that can be used when teaching a Numerical Analysis course using SAGE.

The ability to use SAGE as a computational tool as well as a tool for creating 2D and 3D graphics will help making your class more interactive, more productive, and more fun. (Received June 29, 2014)