Dear students in Civil Engineering,
Also for the current academic year, we are announcing the course *Essentials of Scientific Computing* to review the fundamentals of scientific programming. The course will start on September 12, before the beginning of the fall semester.

Motivation
Through this course, we wish to provide some support to the students attending "tough" first-year courses of the Master degree, in particular those courses heavily based on scientific computing (such as Structural Mechanics, Computational Mechanics) or planning and design courses (such as Structures in reinforced concrete, Foundations).

Goals
Besides reviewing basic concepts and classical algorithms of numerical analysis (such as solving a linear system of equations, finding eigenvalues and eigenvectors of a matrix, solving an ordinary differential equation with a Runge-Kutta method), the goal of this course is to strengthen the analytical and algorithmic thinking of a student to solve a scientific/engineering problem more effectively.

The instructor will engage students in writing algorithms to get familiar with MATLAB, the most common computational framework used in engineering. The University of Pavia offers free access to MATLAB to students, instructors, and researchers.

Enrollment
Interested students can enroll by filling this form: https://forms.gle/kxvrhHb6Z9htRsNr8.

In-presence participation is highly recommended, due to the interactive nature of the classes. The course will be broadcast using Zoom and the link will be sent to the interested enrolled students.

Assessment
This course is not mandatory, and there will not be an exam. However, the instructor will present an optional project to students.
This project will also count as an optional exercise of the course *Elements of Computational Mechanics*. Therefore, a project positively evaluated by the instructor of *Essentials of Scientific Computing* will contribute to the final grade of *Elements of Computational Mechanics*.

During the course, the instructor will assign several assignments, whose completion will contribute to the bonus point.

Classroom and calendar
The course will take place in the G2 laboratory (G floor of the Engineering Faculty building).
Class schedule:
- 09/12, h 2:00 pm - 6:00 pm
- 09/13, h 2:00 pm - 6:00 pm
- 09/15, h 2:00 pm - 6:00 pm
- 09/19, h 2:00 pm - 6:00 pm
- 09/20, h 2:00 pm - 6:00 pm

For any other info, you can contact the instructor at ngocmaimonica.huynh@unipv.it