

Course N°02 Vectors in MATLAB Cont. and Compl.



Dr. Salah Djerouni



📣 MATLAB®



1. Vector operations

In this section, let us discuss the following vector operations

Addition and subtraction of vectors

Multiplication of vector

Division of vector

Power of vector, and

Transpose of vector

Besides the standard vector operations, MATLAB performs an element-by-element array operations

(addition, subtraction, multiplication, division, and power) among vectors of the same dimensions.

To illustrate this **special feature**, consider **two vectors**, **a** and **b**, of **n=3** elements.

2.1. Addition of vectors

You can add two vectors. Both vectors must have the same number of elements (the same dimension).

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2.2. Subtraction of vectors

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2.3. Multiplication of vectors

It distinguishes between vectorial product and scalar product:

Vectorial product is the **multiplying** of **two given vectors element-by-element** whose defined in **MATLAB** by the following way.





Scalar product is the **multiplying** of **two given vectors row-by-column** whose defined in **MATLAB** by the following way.

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2.4. Division of vectors

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3. Other useful MATLAB functions

3.1. Display single value from vector

In order to **show** or **peak** or **extract** or **display** single value from vector already written by MATLAB, we need to know the **position** or the **order** of that element in the vector

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3.2. Replace single value from vector

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3.3. Display multiple values from vector

To **show** or **peak** or **extract** more than one value from that vector already given, we need to use brackets [. .] inside the parenthesis ()

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3.4. Replace multiple values from vector

In case we want to replace in two position different the same value

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To this end, in case we want to replace in two position different two values different of a given vector written by MATLAB

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List of References

MATLAB A Practical Introduction to Programming and Problem Solving

MATLAB A Self-Teaching Guide

MATLAB for Beginners



Mohamed Khider University of Biskra, Algeria Faculty of Sciences and Technology Department of Civil Engineering and Hydraulics 2nd Year Civil Engineering / Hydraulics / Public Works



