

METTI5 Tutorial T7 on

“Experimental identification of low order model”

Author

Jean-Luc Battaglia, Laboratory I2M, Department TREFLE.

Duration

1 h 30

Type

Experimental/Numerical

Content

The goal of this tutorial is to apply the system identification technique in order to obtain an accurate direct model devoted to measurements inversion. This tutorial is closely related to Lecture L8. A simple experiment will be used in order to give the basic ideas of the optimal experiment in system identification approach. The choice of the excitation sequence will be particularly emphasized. Two methods will be used: the correlation method and the parametric method. A direct model will thus be obtained and it will be analyzed in terms of reliability and accuracy.

As a conclusion, the advantages of this approach will be pointed out with respect to the classical one based on the resolution of the heat diffusion equation.