

## **METTI5 Tutorial T12 on**

### **“Analysis of errors in measurements and inversion”**

#### **Authors**

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#### **Duration**

1h30

#### **Type**

Methodological/numerical

#### **Content**

In this workshop, we recall first of all the sources of errors found in the inverse problems. We focus then on the errors connected to the measurements by thermocouples. This approach allows to underline the phenomena involved, as well as the analytical models in permanent and in transitory regimes, that are developed in the literature. This analysis, although fundamental, remains limited in complex cases. So, numerical models are then set up, to show the errors committed during measurements with various types of thermocouples and with various modes of setting-up. They concern an application connected to the welding of metallic materials.