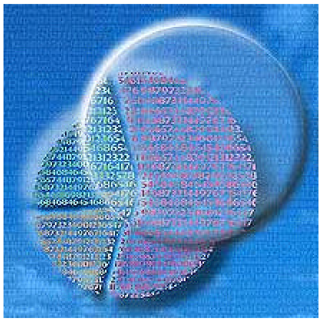
Global Sensitivity Analysis: a primer. How to assess parameters importance in model based studies



Intensive one day course.
Joint Research Centre of the European Commission, Ispra,
Via E. Fermi, Ispra,
Building 36, Room 2
July 10 2002 From 9.00 to 19.00
Registration Required – No fee requested
Contact: Silvia Longoni, silvia.longoni@jrc.it
Deadline for registration July 3.

Programme

Lesson 1 The why, where and what of Global Sensitivity Analysis
Andrea Saltelli **9.30-10.30**

- What is sensitivity analysis?
- Properties of an ideal sensitivity analysis method
- Defensible settings for sensitivity analysis
- Caveats

Coffee Break **10.30-11.00**
Lesson 2 Some worked example
Stefano Tarantola **11.00-12.00**

- ANOVA decompositions
- The jumping man ST
- ANOVA decompositions applied to it.
- Composite Indicators
- ANOVA decompositions applied to it.

Lesson 3 Variance based methods
Andrea Saltelli and Stefano Tarantola **12.00-13.00**

- More on variance based methods
- Computational issues
- Level E application

Free Discussion and Lunch **13.00-15.00**
Lesson 4 How to screen among many factors
Francesca Campolongo **15.00-16.00**

- "Small fishes"
- The screening method of Morris
- Morris applied to the small fishes
- Conclusions

Lesson 5 Monte Carlo Filtering, regionalised sensitivity analysis and generalised likelihood uncertainty estimate (GLUE)
Marco Ratto, Francesca Campolongo **16.00-17.00**

- Antecedents (MCF, RSA, GLUE)
- Combining GSA and GLUE

- Application in financial risk assessment

Coffee Break **17.00-17.30**

Lesson 6 How to use SIMLAB
Marco Ratto and Stefano Tarantola **17.30-18.30**

- SIMLAB
- … or do it yourself?

Feedback to the speakers – problem input, general or particular discussions
18.30-19.00