PERSALYS, roadmap to 2026

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Contents

New features

- Implement Helbert-Schmidt independence criterion (HSIC) analysis
  New type of sensitivity analysis
- External model
  Export DoE for external evaluation then import back in Persalys
- Excel model
  Edit excel file on-the-fly similarly to a coupling model

Calibration

▶ Follow OpenTURNS improvements regarding calibration
▶ Allow to calibrate field model functions

Data models (1)

- ▶ Import data from Excel files
- ▶ Outliers analysis
- ▶ Improve data visualization
- ▶ Add standard regression coefficients (SRC) based sensitivity analysis
- ▶ Kernel based inference for 1-D distributions and N-D copulae

Data models (2)

▶ Marginal inference:
  ▶ with truncature parameters
  ▶ estimated parameters law, Bayesian information criterion (BIC) confidence interval and law
▶ Quantile estimation:
  ▶ Wilks' method
  ▶ Tail fitting (GPD and KS)
▶ Improve results visualization for discrete variables

Performance

- ▶ Standardize local and remote evaluation
- ▶ Remote job progress visualization
- ▶ Detach-attach evaluations
  - ▶ Central tendency
  - ▶ Sensitivity analysis
  - ▶ Reliability analysis
- ▶ Improved error handling

Designs of Experiments (DoEs)

▶ Allow to reuse internal DoEs
▶ DoE sub-selection for MetaModel analysis

Field models

- DataFieldModel
- FieldModel metamodel
- Expose central tendency metamodel result
- Local Sobol' indices
- FMIFieldModel
- YACSFieldModel

The end

Thanks !

Questions ?