

Categories for Engineering & Consulting

Category E1

Creating models with the standard SIMPACK functionality

Examples

- General model set-up with standard library elements
- Automotive multi-body suspensions with standard designs
- Railway bogies with standard designs
- Performing and evaluating simulation runs with customer models

Category E2

Creating models with the standard SIMPACK functionality requiring the use of third party software tools (such as Finite Element). Expert level in SIMPACK.

Examples

- Using flexible bodies in SIMPACK (SID-file)
- Advanced driving gears in railway vehicles (single wheel bogies, articulated bogies, etc.)
- Active suspensions using SIMPACK Control
- Co-Simulation with controllers in Matlab Simulink

Category E3 („Senior Consultant“)

Creating models with the standard SIMPACK functionality requiring the use of third party software tools (such as Finite Element). Expert level in SIMPACK and system-know-how.

Examples

- Importing flexible bodies into SIMPACK (setting master-nodes for reduction, calculation of frequency response modes)
- Consulting, concerning ride comfort optimisation of rail vehicles with flexible car bodies
- Entire automotive models with flexible parts and existing user routines (for instance pulling away and gear change manoeuvres)

Category E4 („Expert“)

Creating models with the extended SIMPACK functionality (parallel development of new features), leading SIMPACK- expert know-how, SIMPACK development know-how and/or system know-how, taking over of development risks.

Examples

- Creating real-time models as C-Code
- Creating optimisation scenarios within SIMPACK (e.g. suspension optimisation)

Categories for Development Services

Category D1

Development of user routines, taking over of development risks.

Examples

- Coding of user routines using customer defined approaches
- Tuning of customer user routines

Category D2 („Senior Developer“)

Development of interfaces to SIMPACK based on file exchange, MBS know-how, software-integration, taking over of development risks.

Examples

- Development of an interface to other multi-body simulation tools
- Creating a leaf spring model with friction as a user routine
- Coding of user routines based on a list of requirements
- Development of a CAD-interface

Category D3 („Expert Developer“)

Development of interfaces to SIMPACK based on new scientific approaches, leading MBS know-how, additional non-MBS know-how, system know-how, taking over of development risks

-> best in class development services.

Examples

- Interface SIMPACK-FEM-Fatigue tools
- Code based real-time plug-in for MBS-models and in-house HIL solutions
- Development of generic suspension sub-systems