Optimus Rev. 2019.1 features state-of-the-art Ensemble Modeling and Neural Network Modeling.

PRESS RELEASE

Leuven (Belgium), April 3 - 2019 – Noesis Solutions, the developer of Optimus and id8, announces the release of Optimus Rev. 2019.1. This release enriches Optimus' range of modeling methods powered by Machine Learning, introducing state-of-the-art Ensemble Modeling and Deep Neural Network Modeling. Along with significant updates to several interfaces with leading CAD/CAE solutions and a more fine-grained control on engineering workflow execution, this new 2019.1 release brings Optimus' market-leading PIDO technology to a growing community of both expert and non-expert users.

Deep Neural Network Modeling for high-dimensional engineering problems

Building a bridge between the accuracy of Interpolation modeling and the computational speed of Approximation modeling, Optimus 2019.1 Deep Neural Network modeling is a perfect fit for high-dimensional engineering problems involving large and noisy data sets.

Optimus Deep Neural Networks' capability to reproduce the behavior of complex, non-linear systems with almost arbitrary accuracy enables a wide range of applications. These include, for example, a much more efficient integration of computationally expensive component models into system simulation models by replacing these component models with high-fidelity Functional Mock-up Units (FMUs). Other potential applications include the analysis of complex CFD images to locate specific features such as turbulence or the evaluation of a high number of different designs while discriminating between feasible and infeasible designs.

Assisting non-expert users through Ensemble Modeling

The Optimus 2019.1 Ensemble Modeling capability is highly recommended for engineering problems that involve relatively small and heterogeneous data sets, and require further engineering expertise to be built up.

Even though Ensemble Modeling belongs to the same model family as the Best Model approach introduced with Optimus 2018.1, both model types are fundamentally different. Whereas the Best Model type selects the best model among the available Optimus models to fit a given data set based on user criteria, Ensemble Modeling creates an entirely new model by averaging the

available Optimus models. Ensemble Modeling is particularly useful in assisting non-expert users to better understand their engineering problems via a model averaging approach.

A more fine-grained control on engineering workflow execution

In addition to the new Deep Neural Network & Ensemble Modeling capabilities, Optimus 2019.1 brings significant updates to several interfaces with leading CAD/CAE solutions – including JMAG Designer, PTC Creo 5.0, CETOL 10.2, NX CAE and LS-Dyna. Moreover, Optimus users now have more control on rejection rules when building engineering simulation workflows. Rejection rules are used to determine whether an engineering simulation experiment should be excluded from post-processing, and the related new capabilities grant a more fine-grained control on engineering workflow execution.

About Noesis Solutions

Noesis Solutions is an engineering innovation partner to manufacturers in engineering-intense industries. Specialized in solutions that enable **Objectives Driven Draft-to-Craft Engineering** processes, its software products and services help customers adopt a targeted development strategy that resolves their toughest multi-disciplinary engineering challenges.

This **Engineer by Objectives** strategy entails an automated approach that streamlines engineering processes to manage the growing complexity of today's engineering challenges efficiently. In addition, interactive design space visualization allows engineering teams to make informed decisions faster – empowering them to form & transform ideas into products that outsmart the competition

Noesis Solutions operates through a network of subsidiaries and representatives in key locations around the world. For more information, please visit www.noesissolutions.com.

Noesis Solutions Press Contact:
Kirsten Cabergs
Phone +32 16 31 70 40
kirsten.cabergs@noesissolutions.com

Noesis Solutions NV
Gaston Geenslaan 11, B4
3001 Leuven - Belgium
Phone +32 16 31 70 40 - Fax +32 16 31 70 48
www.noesissolutions.com