

Digimat 2017.1 Delivers the First Simulation Chain for Additive Manufacturing of Polymers

NEWPORT BEACH, CA --(March 14th, 2017) - [e-Xstream engineering](#), an [MSC Software Company](#), developer of [Digimat](#), the leading nonlinear multi-scale material and structure modeling platform, announced the latest product release of Digimat 2017.1 at JEC World 2017 (Hall 5A/C68). Digimat continues to provide a leading solution for the accurate and efficient modeling of multi-scale material and structures, by extending its range of applications and continuously improving its overall workflow efficiency. Digimat 2017.1 will be available in April 2017.

Digimat for Additive Manufacturing

Building on its large experience with polymer modeling, with Digimat 2017.1, e-Xstream is introducing the first simulation chain for additive manufacturing of polymers, Digimat Additive Manufacturing (Digimat – AM). Additive manufacturing of plastics and composites is evolving from rapid prototyping to industrial production. Printer manufacturers, material suppliers, and end-users need predictive simulation tools to bring the additive manufacturing efficiency and performance to the next level required by the industry. Digimat- AM has already been recognized with a JEC Innovation Award in the software category for its innovation and market potential.

Digimat-AM, the latest edition to the Digimat platform, is the ultimate simulation solution for manufacturing process of Fused Filament Fabrication (FFF), Fused Deposition Modeling (FDM) and Selective Laser Sintering (SLS) of reinforced materials. For printer manufacturers and end-users, the part fidelity is the top challenge to overcome. Digimat-AM allows the engineer to predict warpage and residual stresses of a polymer part as a function of the manufacturing process parameters. With Digimat-AM, users can further optimize the process and minimize the part deformation right at their fingertips. Virtual engineering is the solution to minimize printing trial and errors because it enables the user to explore the process sensitivity to manufacturing parameters.

By applying multi-scale material modeling techniques to the additive manufacturing of polymers (unfilled and reinforced), Digimat's virtual material compounding and characterization is a key enabler for customers developing new materials. Virtual engineering allows the engineer to significantly reduce physical tests, understand the key parameters driving the material's behavior, and easily create new material systems, such as lightweight lattices.

"With solutions for materials development, process simulation, and printed part performance, Digimat Additive Manufacturing is a completely innovative solution that's fully dedicated to reinforced plastics and composites, allowing its users to 'print it right the first time'" - Roger

Assaker, CEO of e-Xstream engineering, Chief Material Strategist of MSC Software.

Improved efficiency

Digimat's latest release not only opens new horizons and a new way of designing but also brings some nice additional features. Digimat material model reverse engineering capabilities have been extended for creep and crash performances to better support material engineers. Structural engineers now benefit from significant CPU reduction when simulating the as-manufactured performance of MuCell® components, or when simulating creep of plastic parts.

About e-Xstream engineering

Founded in 2003, e-Xstream engineering, an MSC Software Company is a software and engineering services company 100% focused on the multi-scale modelling of composite materials and structures. The company helps customers, material suppliers, and material users across many industries. They aim to reduce the cost and time needed to engineer innovative materials and products using Digimat, the nonlinear multi-scale material and structural modelling platform. Since September 2012, e-Xstream engineering is a subsidiary of MSC Software Corporation. For additional information about e-Xstream's products and services, please visit: www.e-xstream.com

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About MSC Software

MSC Software is one of the ten original software companies and a global leader in helping product manufacturers to advance their engineering methods with simulation software and services. As a trusted partner, [MSC Software](http://www.mscsoftware.com) helps companies improve quality, save time, and reduce costs associated with design and test of manufactured products. Academic institutions, researchers, and students employ MSC's technology to expand individual knowledge as well as expand the horizon of simulation. MSC Software employs 1,300 professionals in 20 countries. For additional information about MSC Software's products and services, please visit: www.mscsoftware.com

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