Digimat-FE is a complete tool for the end-to-end investigation of composites based on finite element homogenization. It addresses a very wide range of materials and physics, from woven composites to short fiber reinforced plastics, from non-linear mechanical analysis to electrical conductivity and percolation analysis.

Relying on finite elements, it provides a very detailed insight into the influence of the microstructure on the mechanical, thermal and electrical properties of a composite.

**KEY BENEFITS**

- Accurate & efficient analysis of complex material systems
- End-to-End (geometry>mesh>solver) robust solution with built-in nonlinear FE solver.
- Easy-to-Use interface for FE experts and non-experts

Digimat is relied upon by major Material Suppliers, Tier1 and OEMs Worldwide.

VISIT US AT www.e-xstream.com
HOW DOES IT WORK?

4 steps to investigate a composite material:

• Define composite microstructure & constituents material properties
• Generate a geometrical model of the composite microstructure (Representative Volume Element - RVE)
• Generate a ready-to-run finite element analysis, using the embedded mesher (conforming or voxel mesh) or external mesher
• Launch, monitor & post-process the FE analysis using the embedded FE solver (or start the finite element analysis from the external solver) and post processing tools

Supported Types of Composites:
• Short fiber reinforced plastics
• Long fiber Reinforced Plastics
• Discountinuous Fiber Composites (e.g. HexMC(r))
• Unidirectional composites
• Woven & braided multiphase materials
• Hard metals
• Foams
• Filled rubber

Supported Physics:
• (Thermo)-Mechanical, linear and non-linear stiffness analysis including decohesion
• Thermal conductivity analysis
• Electrical conductivity analysis including clustering effect and percolation analysis

Interfaces to External Solvers:
• Marc
• Abaqus/Standard
• Ansys

Get access to a powerful end-to-end tool for your in-depth RVE analysis!

CONTACT US TO GET YOUR DEMO LICENSE TODAY!

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