

Technical Specification: Mechanics and applications of responsive soft matter

1	1	Automatic/semiautomatic segmentation software and add on to export FE and CFD models	<p>Software environment for comprehensively processing 3D image data (MRI, CT, micro-CT, FIB-SEM). Software must offer powerful image visualisation, analysis, segmentation, and quantification tools. Export to CAD and 3D printing. (+ 2 years maintenance)</p> <p>Add-on should provide industry-leading software tools for converting image data to water-tight Finite Element (FE) and Computational Fluid Dynamics (CFD) models for simulations. The module must offer the broadest range of image-based meshing tools and most robust meshing algorithms, with extensive options for tailoring models to different simulation requirements. Rely on meshing software that generates simulation-ready models, with no need for postprocessing or fixing. Export directly to all major FE/CFD solver formats : .inp (ABAQUS), in (ADINA), .ans, .cdb (ANSYS), .nas, .mph, .mphtxt (COMSOL), .nas, .out, .vtk and .mat. These files should be exported with model configurations, i.e., material property, boundary conditions, nodes, shells, contact points, etc.</p>	Integrated Microsystem
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			(+ 2 years maintenance) One concurrent user using a network license	
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- This software should have been supplied to at least one IIT or NIT and provide certificate from user.