

# Preface

High-level applications of composite materials at affordable development and manufacturing costs create significant demand for scientific knowledge and computational tools for composite manufacturing. The mechanical behavior of composite parts in service is dominated by fiber orientation and density, which in turn, are determined by the forming process. Hence, predicting in-service performance requires full understanding and, preferably, prediction of the complex material behavior during manufacturing.

Experimental and numerical “benchmarks” are set up and discussed within the composites forming issue. The topics of it concern: Material characterization; Constitutive laws; Contact and friction; Forming simulations; Multiscale analyses; Textile forming, Thermoforming; Resin injection; Compression Molding; Fiber suspensions; Natural fibers; Additive manufacturing of composites; Benchmark efforts.

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