ADVANCED STRUCTURES & composites center

SMART MANUFACTURING

R&D leveraging UMaine's expertise in forest-derived and novel composites with the world's largest thermoplastics 3D printer to drive the future of advanced manufacturing with applications in marine, aerospace defense, housing, and transportation industries.

1865 THE UNIVERSITY OF MAINE

The Advanced Structures and Composites Center stands at the forefront of Large-scale Flexible Additive and Hybrid Manufacturing, producing large, integrated, born-certified systems in a closed-loop digital manufactured environment, powered by high-performance computing and AI to deploy solutions that strengthen national security.

Our expertise spans industrial sectors such as—

- Marine
- Manufacturing
- Infrastructure
- National defense
- Aircraft
- Space
- Housing

ASCC's innovative work plays a vital role in protecting critical national interests.

We advance marine industry capabilities through vessel structures and composite tooling, while driving forward manufacturing technologies for Expeditionary Advanced Base Operations (EABO) in defense. Our interdisciplinary approach develops crucial defense technologies and paves the way for civilian applications, ensuring a strategic impact enhancing security and contributes broadly to societal advancement.

The Advanced Structures & Composites Center

KEY FOCUS AREAS + CAPABILITIES

- Small & Large-Scale Additive Manufacturing
- Textiles
- Digital Manufacturing
- Process Control & Robustness
- Predictive Modeling & Simulation
- Hybridized Advanced Additive Manuacturing
- Material Development
- Scale Model Fabrication
- Finite Element Analysis
- Instrumentation & Data Collection

Proud member of America Makes

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