Lightweighting for the Masses™
About WEAV3D

2014
Technology invented

2017
WEAV3D founded out of Georgia Tech

TODAY
Headquartered in metro-Atlanta, Georgia

$2.5M+
In R&D and commercialization funding

Weav3d.com
Technology invented

WEAV3D founded out of Georgia Tech

Headquartered in metro-Atlanta, Georgia

$2.5M+
In R&D and commercialization funding
Lightweight materials are expensive due to both material and process cost — WEAV3D addresses process cost challenges inherent to traditional composites.

Mass Market Applications are Historically Underserved by Composites

AUTOMOTIVE

AEROSPACE

SPORTING GOODS
Lightweight Composites 50 Years of Maturity in Aerospace

CHALLENGES
OF TRADITIONAL COMPOSITES

BATCH PRODUCTION
HIGH PART COST
DIFFICULT TO RECYCLE
Lightweight Composites  50 Years of Maturity in Aerospace

**CHALLENGES OF TRADITIONAL COMPOSITES**

- Batch Production
- High Part Cost
- Difficult to Recycle

**WEAV3D’S SOLUTION**

- Mass Production
- Up to 75% Less Expensive
- Recyclable & Reprocessable
Rebar for Plastics®

Process Overview

LATTICE WEAVING & CONSOLIDATION

WEAV3D Product

TRIMMED COMPOSITE LATTICE

WEAV3D Process

THERMOPLASTIC PREPREG TAPE
Commercially Sourced

LIGHTWEIGHT STRUCTURAL COMPOSITE PART

INJECTION MOLDING

OVERMOLD TOOL

Lattice

COMPRESSION MOLDING

D-LFT, SMC or BMC

Lattice

THERMOFORMING

Thermoplastic Sheet

Lattice
WEAV3D Full-Scale Pilot Machine

Patent-pending customizable lattices and lattice forming process
Why Composite Lattice?

**Tunable**
- Locally optimized:
  - Lattice density
  - Tape material

**Handleable**
- Woven and welded at interlace for stability
- Sheet or roll format

**Formable**
- Reheat/reform
- Form in mold
- Colamination

Strategic use of UD tapes in lattice provides a cost-effective and adaptable solution
Competitive Process Cost Comparison for Automotive Door Panel

- Hand Layup: $198
- RTM: $93
- TP-AFP: $54
- WEAV3D: $26
Smarter than Steel™ Hybrid Material Lattices

Enable Smart Structures

WEA3D lattices can combine structural reinforcement with transmission materials
Rebar for Plastics® Automotive Opportunities

2025 Automotive Composites Market

GLOBAL AUTOMOTIVE COMPOSITES
NORTH AMERICA & EUROPE
INTERIORS & EXTERIORS

TARGET

$1.4 BILLION

$4.7 BILLION

$7.7 BILLION

$11.6 BILLION
Leadership Team

CHRIS OBERTSE, PH.D.
Founder & CEO

LEWIS MOTION
Founder & COO

BURT SMITH
VP of Sales

Engineering Team

PHILLIP CHENG
Principal Electrical Engineer

MEGHANA KAMBLE
Finite Element Analysis Engineer

COLEEN TRAN
Process Engineer

www.weav3d.com
WEAV3D is partnering with OEM and Automotive Tier suppliers to support automotive product development.

To learn more, get in touch with us at info@weav3d.com.
## WEAV3D Applications & Value Proposition

<table>
<thead>
<tr>
<th>Example Application</th>
<th>Structural Metal Substitution</th>
<th>Structuralizing Molded Plastics</th>
<th>Composite Optimization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weight Reduction</strong></td>
<td>++++</td>
<td>++</td>
<td>++</td>
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<tr>
<td><strong>Part Count Reduction</strong></td>
<td>++</td>
<td>++++</td>
<td>+</td>
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<tr>
<td><strong>Upcycling of Recycled Reinforcements</strong></td>
<td>++</td>
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<td>+</td>
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<tr>
<td><strong>Expanded Use of Natural Fillers</strong></td>
<td>+</td>
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WEAV3D Value Proposition: *Automotive Door Panel*

WEAV3D approach achieves significant weight-reduction within $2.50 per pound-saved threshold.
WEAV3D Intellectual Property Overview

**BACKGROUND IP**
LICENSSED FROM GEORGIA TECH

- **COMPOSITE LATTICE**
- **2 FORMING METHODS**
- **3 MACHINES**
- **TRADE SECRETS**

1 issued patent, 2 applications in prosecution

**WEAV3D IP STRATEGY**

- **MACHINE IMPROVEMENTS**
- **DESIGN SOFTWARE**
- **LATTICE PLACEMENT TOOLING**
- **TRADE SECRETS**
- **LATTICE APPLICATIONS**
- **TRADEMARKS**

New patent applications filed 12/2019 and 3/17/2020
WEAV3D® and Rebar for Plastics® are registered trademarks

Exclusive licensed background IP enables dominant IP portfolio for new technology platform.
WEAV3D Engagement Model

Collaborative Design

- Application Scoping
- Proof of Concept
- Part Selection
- FEA Simulation
- Part Optimization and Prototyping