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(<https://icem19.org/>)**

**Special Session on
Recycled Constituent Composites**

The session on Recycled Constituent Composites includes processing and characterization of composites manufactured from recycled materials. These composites exhibit light weight and high strength, while having a low manufacturing cost. Industry has seen an increasing demand for high performance, low cost materials, as well as energy-saving production techniques.

As engineers, we are challenged to design with confidence for the long-term performance applications. Many composites manufactured from recycled materials, such as scrap rubber, recycled thermoplastic, scrap metallic (aluminum, bronze, etc.) chips, offer the light weight, strength and durability needed for aircraft and automotive applications.

Currently these composites often are made up of thermosets reinforced with ground scrap materials, producing tough, corrosion resistant parts. Machining chips are being used as the metal matrix for composites through sintering, casting, and thixoforming. Recycled glass and carbon fibers are being used as fillers in resin, with recycled rubber, plastic, wood, asphalt, or polymers to improve the mechanical properties for certain applications.

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