**Presenter Information**

Dr. Robert Yancey
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**Experience/Company Background with Advanced Composite Materials**

Hexcel is a global leader in advanced composites technology. Dr. Robert Yancey currently leads business development for Hexcel in the Americas which includes advanced materials, manufacturing, and engineered products. He has a technical background in composite materials, composite mechanics and micromechanics, design optimization, additive manufacturing, finite element modeling, and nondestructive evaluation. He holds a B.S. degree in Aeronautics and Astronautics from MIT, an M.S. degree in Engineering Mechanics from Virginia Tech, and a Ph.D. in Materials Engineering from the University of Dayton. He is an AIAA Associate Technical Fellow and Composites Factory of the Future Lead for SAMPE.

**Title**

Additively Manufactured Carbon Fiber PEKK

**Presentation Description**

This presentation is a discussion of the challenges of transitioning additive manufacturing (3D printing) from a prototyping technology to a flight-worthy, production-ready technology. The demanding quality and material performance requirements of aerospace set a high bar for qualifying additively manufactured components. For additive parts to fly they also need to compete on the same merits as traditional manufacturing methods: cost, weight and lead time. Hexcel’s HexPEKK® material, which is a high-performance polymer/carbon blend processed with selective laser sintering, meets that high bar. This presentation introduces the HexPEKK® material and how Hexcel’s integrated manufacturing lends itself to use on defense, space, and commercial aviation applications.