

## Plenary Lecture

Title	Prof./Dr.	First Name	Yeon-Gil	Last Name	Jung
Affiliation		Changwon National University			
Presentation Title		TBC and EBC Technologies for Gas Turbine			
Biography		<p>Yeon-Gil Jung is a professor of the Department of Advanced Materials Convergence Engineering at Changwon National University since 1999. He received his PhD in inorganic materials science and engineering from Hanyang University. He was a visiting scientist at NIST during 1997—1999 and 2003—2004, and at IUPUI during 2013—2017. From July 2021 to May 2025, He served as the president of the Korea Institute of Ceramic Engineering and Technology.</p> <p>Professor Jung's research interests include the design and manufacturing of ceramic materials, thermal barrier coatings, ceramic-metal composites, layered material design and manufacturing, and material evaluation. He has contributed to over 450 publications, 60 patents, and active participation in various national-level institutional committees.</p>			
Abstract		<p>SiCf/SiC composite is disruptive material for the hot-section components in new generation aviation engine. High temperature coatings, including thermal barrier coating, environmental barrier coating, as well as abradable coating, can protect various SiCf/SiC components against harsh thermal and chemical attacks in combustion environment. The request for service temperature of coatings has been critically increased up to 1350 to 1500oC, regarding the various combustion environments. The key technology depends on the whole chain advancement of intelligent design, feedstock production, coating fabrication, and coating evaluations. This talk presents the recent progresses of high temperature coating technologies for SiCf/SiC components in aviation engine. The developments support the explorations and applications of SiCf/SiC composite in high-thrust aeroengine.</p>			