Asian American Engineer of the Year

Dr. Dongming Zhu

Materials Research Engineer
NASA Glenn Research Center

Citation of Accomplishment:

Sustained significant contributions and innovation in ceramic coating development for aircraft engine hot section materials.

Dr. Dongming Zhu is a senior materials research engineer at NASA Glenn Research Center.

He is an internationally recognized leader in the area of turbine engine coating technology with over 15 years of professional experience. He has led the development of new environmental barrier coatings for future generations of turbine engines, and he has also led the development of advanced laboratory test techniques for evaluating performance of advanced turbine engine coatings.

Dr. Zhu holds five patents on thermal and environmental barrier coating development. He has authored 51 journal papers, 88 conference papers and reports, and 14 edited books on topics of coatings development, ceramic fatigue and fracture, high temperature oxidation, and erosion and wear. He is Chair of the Engineering Ceramics Division of the American Ceramic Society. He has served as a Symposium Chair/Organizer for the International Conference on Advanced Ceramics and Composites since 2001, and he served as Program Chair in 2007. He has served as an associate editor for the American Ceramic Society's International Journal of Applied Ceramic Technology, a guest editor for the Journal of Thermal Spray Technology, and editor of the Ceramic Engineering and Science Proceedings.

He is a Fellow of the American Ceramic Society. He was recognized in 2007 with an R&D 100 award as part of a team that developed coatings for Silicon based ceramic turbine engine components. In 2009, he was a recipient of the NASA Exceptional Technology Achievement Medal recognizing his substantial contributions to turbine engine coating development and technology transfer.

He has served as a mentor to undergraduate student interns and supported high school student shadowing at NASA. He is an active volunteer for the Cleveland Ice Skating Club and the Cleveland Chinese Church, supporting Bible study groups and charity activities.

He received his B.S. and M.S. degrees in Materials Science and Engineering from Hefei University of Technology, Hefei, China. He received his Ph.D. in Chemical Engineering and Materials Science from the University of Minnesota.