

## Prof. Stephen Dale Antolovich

12/29/1939 – 7/25/2024



Professor Antolovich received his BS and MS degrees from the University of Wisconsin, Madison in 1962 and 1963, respectively, and his PhD from UC, Berkeley in 1966. After a brief stint at the Lawrence Livermore Laboratory in Berkeley as a staff scientist, he joined the faculty at the University of Cincinnati in 1968 in the Department of Materials Science and Metallurgical Engineering, where he rose to the rank of full professor in 1974. He then moved to the Georgia Institute of Technology in Atlanta in 1983 and became the founding Director of the School of Materials Science and Engineering in 1986.

Professor Antolovich moved to Washington State University in Pullman, WA in 1993 as Professor and Director of the School of Mechanical and Materials Engineering. At the time of his passing, he was an Emeritus Professor at Georgia Tech and Washington State University. He was an inspiring classroom teacher with a wonderful rapport with his students and an outstanding mentor to all his research students and post-doctoral fellows. Several of his former students and post-docs occupy important positions in corporations, research labs, and academia. He developed active collaborations with researchers in France where he spent several sabbaticals. Prof. Antolovich was a magnet for attracting good students to his research group, and he spent time with them and mentored them to achieve their full potential despite the heavy administrative load that he carried as the head of the department for many years. He worked tirelessly to recruit, mentor, and support young faculty, promote their successes, and become their lifelong friends.

Professor Antolovich was internationally known for his research conducted over six decades to understand fracture, fatigue, constitutive relationships, and structure-property relationships in metals and composites. His profound intuition regarding the role of defects and microstructure in the mechanics and mechanisms of fracture was a key characteristic of these contributions. He published over 130 papers with several cited by over 400 researchers, for 4433 citations overall. His research covered,

- Monotonic and cyclic deformation and crack growth mechanisms in Ni-base superalloys
- Structure-property relationships during deformation and fracture at high temperatures
- Physics-based modeling of complex fracture and fatigue phenomena
- Fracture mechanics and understanding of mechanisms of deformation and fracture in metals and composites
- Improving ductile and brittle fracture resistance in Maraging Steels and TRIP Steels by microstructure tailoring

Dr. Antolovich received numerous awards from national and international professional bodies over his long career including the ASME Nadai Medal, ASM International Fellow, ASME Fellow, Fellow of the International Congress on Fracture, the Reaumur Medal from the French Metallurgical Society, Outstanding Teacher Award from the University of Cincinnati, and Outstanding Research Development Award from Georgia Tech. He had many hobbies and was a dedicated family man who left a legacy. He is survived by his wife of 63 years, Barbara Antolovich, his daughters Laura Nicole Griggs and Michelle Ramirez, four grandchildren, and one great-grandchild. He was predeceased by his son Dr. Bruce Fergus Antolovich.