George E. Stelmach

George Stelmach is Professor Emeritus at Arizona State University. After earning a BS degree at the University of Illinois and Master's and Doctorate degrees at the University of California-Berkeley, Professor Stelmach went on to have an memorable career, holding professorate positions at the University of California, Santa Barbara, (1967-1971), the University of Wisconsin, Madison, (1971-1990), and Arizona State University, (1990-2010). In addition, he had research appointments at the Imperial College of Medicine, Oxford University, and Institut National de la Sante et de la Recherche Medicale, Lyon, France. At Arizona State University, he directed the Motor Control laboratory known for training graduate students and post doctorates to become independent scientists. In the laboratory he was known as a talented scientist, a dedicated supervisor, and successful mentor.

More specifically, Professor Stelmach's teaching and research interests were in the areas of movement control and learning, aging, and the neurosciences. His diverse research examined human movement coordination and sought to understand how the central nervous system controls and regulates movement in normal individuals and in those with neurological impairments. Research topics included: multi-joint coordination mechanisms, visuo-motor adaptation, sensorimotor integration, fine movement control, reaching and grasping, and force control. This research examined how the macro and microstructure of upper-extremity movement is altered by transient or permanent changes in the human brain due to aging and Parkinson's disease. Of special interest was how motor control strategies are altered through normal aging and pathology.

As a lead scientist, Dr. Stelmach published approximately 300 manuscripts and 4 books in kinesiology related journals, and he made numerous presentations at national and international meetings, conventions, and congresses. Much of his research is well-known and was considered innovative in showing how movement control is influenced by sensory information. Additionally, he was one of the seminal scientists to describe the variant and invariant properties of prehensile movements, and how these coordination properties are maintained across a variety of environmental settings. These studies led to one of the prominent hypotheses in the Movement Disorder's area that can potentially explain why individuals with neurotransmitter disease have difficulty controlling and coordinating movement. This hypothesis utilizes output variability from the basal ganglia to the cortical motor centers which can predict many of the impairments observed in individuals with Parkinson's disease. Currently, this hypothesis is actively pursued in many laboratories throughout the world. His work also contributed to a better understanding of biological aging by showing that with advanced aging, proprioception deficits produce more variable movements and create a need to move more slowly.

Professor Stelmach's research was externally funded from peer reviewed grant awards in the kinesiology area throughout his career. Consistent with the interdisciplinary nature of his research, grant support came from diverse funding agencies such as the National Institute of Neurological Diseases and Stroke, National Institute on Aging, National Institute of Mental Health, National Institute of Education, American Parkinson's Disease Association, Burroughs-Wellcome Trust, RS Flinn Foundation, and the Air Force Office of Scientific Research.

During the course of his career, Professor Stelmach received academic achievement awards such as the University of California President's Fellow, University of Wisconsin Royalty Fund Fellow, National Academy of Science Exchange Fellow, Senior Fulbright Research Fellow, Deutscher Akademischer Austauschdienst Award, Netherlands Institute of Advanced Study Fellow, French National Institute of Medicine Fellow, German Research Council Fellow, Austrian Institute of Space Neurology Fellow, and the Max Planck Research Fellow. In addition, Dr. Stelmach was Fellow in the American Psychological Association, Divisions of Experimental Psychology and Engineering Psychology, American Psychological Society, and American Academy of Kinesiology. Furthermore, he was often honored with invitations to be a visiting scholar at some of the most renowned Institutes of Neurology in Europe: University of Dusseldorf, University of Tubingen, University of Innsbruck, University of London, and the Imperial College of Medicine. From 1980-2009, he served as editor of the “Advances in Psychology” book series where 139 volumes were published.

Professor Stelmach lives in Paradise Valley, Arizona, with his wife Rosmary. George is involved in the Emeritus College at Arizona State University and continues to serve on review boards for the National Institutes of Health and Department of Veterans Affairs.