## **Donald H. Mershon**

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Citizenship: USA

Marital Status: Married; two adult children

#### **EDUCATIONAL BACKGROUND**

Blair Academy Graduated, June 1962.
Blairstown, New Jersey College preparatory program

Franklin & Marshall College
Lancaster, Pennsylvania, 17604

BA degree, June 1966 (Psychology).

(Dean's list or Dean's List with Honors, 1964-1966); recipient, Whitely Prize.

University of California, S.B. MA degree, December 1968 (Psychology). Santa Barbara, CA 93106 PhD degree, December, 1970 (Psychology). (Specialization: Human Perception).

## AREAS OF PRIMARY PROFESSIONAL INTEREST

**Visual Spatial Perception:** Specific concerns have centered on the perception of size, distance and motion in three-dimensional visual space, especially under conditions of limited viewing (particularly relevant for understanding errors in spatial performance at night or under conditions of poor visibility). Related interests concern the perception of the absolute scale for perceived space, the integration of multiple sources of spatial information, the effects of aging upon the perception of visual space and spatial perception in virtual environments.

**Auditory Spatial Perception:** Specific concerns have centered on understanding the types of auditory information which provide a sense of the distance to a sound and on understanding how that information is integrated with vision in creating the resulting experience. Research has relevance for developing improved electronic mobility aids for blind persons, for understanding localization problems faced by individuals wearing hearing protective devices, for improving auditory displays and systems which create virtual auditory environments and, in general, for any situation involving the perception of auditory depth/distance.

## FELLOWSHIPS AND PRIOR PROFESSIONAL EXPERIENCE

### July 2011 to present:

# Professor Emeritus (Psychology) North Carolina State University

#### August 2000 to June 2010:

Associate Department Head and Director of Graduate Programs Department of Psychology North Carolina State University

### July 1992 to June 2011:

## Professor of Psychology North Carolina State University

## July 1977 to June 1992:

Associate Professor of Psychology North Carolina State University

## August 1972 - June 1977:

Assistant Professor of Psychology North Carolina State University

## October 1970 - August 1972:

Research Associate and Special Lecturer Department of Psychology York University 4700 Keele Street Downsview 463, Ontario, Canada

## August 1969 - October 1970:

Predoctoral Research Fellow (U.S. Public Health Service, NIMH) Department of Psychology University of California, Santa Barbara Santa Barbara, California 93106

## Summer 1967; Summer 1968:

Research Assistant for Dr. Walter C. Gogel Department of Psychology University of California, Santa Barbara Santa Barbara, California 93106

#### September 1966 - August 1969:

National Defense Education Act Title IV Fellow Department of Psychology University of California, Santa Barbara Santa Barbara, California 93106

#### June 1964 - July 1966:

Research Assistant for Dr. Eugene R. Wist Department of Psychology Franklin and Marshall College Lancaster, Pennsylvania 17604

## REPRESENTATIVE EXPERT CONSULTATION

National Transportation Safety Board: Investigation and hearings into the crash of TWA Flight 800 off the coast of Long Island, NY, in July 1996. (Provided consultation and written analysis of perceptual issues dealing with the validity and interpretation of eye-witness testimony, 1997.)

US Marine Corp: Investigation and courts-martial of the pilot and navigator involved in an accident near Aviano, Italy. Twenty skiers were killed after the EA-6B ("Prowler") aircraft severed the supporting lines of the cable-car in which they were riding, Cavalese, Italy, February 1998. (Visited accident site and locations of multiple eyewitnesses to the earlier portions of the flight. Provided consultation to defense teams regarding the interpretation of witness statements and perceptual problems in judging the position of aircraft from the ground. Provided testimony during the court-martial of Capt. Ashby, the pilot of the EA-6B, February 1999. Following the acquittal of Capt. Ashby on the main charges, similar charges against the navigator were dismissed.)

#### **TEACHING EXPERIENCE**

University of California, Santa Barbara: TA (Laboratory in Cognitive Psychology)

York University (Toronto, Ontario): Psychological Statistics and Intro. to Psychology

North Carolina State University

Perception (undergraduate); Visual Perception (graduate); Perception: Research Methods (undergraduate); Advanced Problems in Perception\* (graduate seminar). Also taught portions of Introductory Psychology and have supervised many dozens of undergraduate research projects, as well as perhaps 100 or more graduate theses/dissertations in perception and/or human factors.

Advanced Problems topics have included: "Audition and Other Non-Visual Senses" and "Perceptual Organization."

Honors: Outstanding Teacher Award (NCSU) – 1975-76.

Danforth Associate (active term 1979-1985).

College's Nominee for Alumni Graduate Professorship, 1983-84.

Alumni Distinguished Professor (NCSU) - 1988-91.

Nominee, Board of Governors' Teaching Award (NCSU), 1995-96.

## **ADMINISTRATIVE EXPERIENCE (NCSU)**

Department of Psychology:

Associate Department Head and Director of Graduate Programs.

Coordinator, Graduate Program in Ergonomics (Psychology);

Coordinator, Graduate Program in Experimental Psychology:

Undergraduate Program Coordinator; Graduate Program Coordinator;

Chairman, Department Programs and Leadership Evaluation Committee; Scheduling Officer (Psychology); Steering and Long-Range Planning Committees;

Faculty Advisor, Carolinas Psychology Conference (for undergraduate research).

Editor, Psychology Newsletter.

Chair, Faculty Search Committee (4 times).

Numerous other assignments and <u>ad hoc</u> administrative functions.

## College of Education/Psychology:

Committee on Academic and Research Computing.

Committee on the Use of Technology Fees; Materials and Media Committee;

Faculty Advisor (Education Council); Building, Equipment, & Safety Committee;

## College of Humanities and Social Sciences:

Graduate Studies Committee (Chair for one year, rotating assignment).

## University:

Committee on the Use of Human Subjects in Research (IRB).

Graduate School Task Force on Evaluation of Graduate Programs.

#### PREVIOUS RESEARCH SUPPORT

Visual factors Affecting Pilots' Judgments of Trajectory-to-Touchdown During Emergency Landings --- approximately \$190,000 over two years.

Funded by National Aeronautics and Space Administration (NASA), 1999-2001

Appearance Defects in Fabrics (with Ralph McGregor and Christopher Pastore, Textile Chemistry) – \$390,000 for full three-year project, 1992-95. Funded as a constituent project of the National Textiles Center (NCSU).

Studies of the Perception, Detection, Measurement and Simulation of Color Differences and Color Defects in Textile Fabrics (with Ralph McGregor, Textile Chemistry) – \$62,000. Funded by consortium of textile manufacturers, 1986-92.

Assessment of Age-Related Changes in Visual Spatial Organization – \$296,700 for three years. Co-Investigator on project funded as a VA Merit Review Award, 1987-90 (T. L. Amerson, Principal Investigator).

Contrast Sensitivity and Fixation Patterns as Diagnostic Predictors for Age-Related Errors on a Depth Judgment Task – \$5,730. Bio-Medical Grant, institutionally funded by NIH through NC State University, 1985-86.

**Auditory Spatial Judgments in Blind Populations** – \$51,000

Funded by National Science Foundation, 1981-82.

#### OTHER PROFESSIONAL ACTIVITIES

- 1. Reviewed manuscripts for *Perception & Psychophysics*, *Science*, *Vision Research*, *Perception*, *Human Factors*, the *American Industrial Hygiene Journal*, *Psychology & Aging* and the *Journal of the Acoustical Society of America*.
- 2. Reviewed presentation proposals for Human Factors & Ergonomics Society (HFES), the Eastern Psychological Assoc. (EPA) and the American Psychological Society. Chaired presentation sessions at meetings of the Psychonomic Society, HFES, EPA and NC Chapter of the Acoustical Society of America (NC-ASA).
- 3. Reviewed Research Proposals for NSF and for Australian Research Council.
- 4. Reviewed texts for Holt, Rinehart & Winston; Houghton–Mifflin; Winthrop; Oxford University Press; and Addison-Wesley.
- 5. Served on Study Group of NAS/NRC concerned with "The Effects of Rain on Judgments of Distance." 1977.
- 6. Executive Committee, NC-ASA, 1989-93. Chair of NC-ASA for 1991-92.
- 7. Member of the Editorial Board, *Human Factors*, 1991-1999.
- 8. Accepted as expert witness on human perception for NC and for the US Military Justice System.
- 9. Executive Committee, Carolina Chapter of the Human Factors and Ergonomics Society. President of HFES-CC for 2012.

#### MEMBERSHIP IN SCIENTIFIC AND PROFESSIONAL ORGANIZATIONS

Acoustical Society of America
NC Regional Chapter of ASA
American Association for the Advancement of Science
American Association of University Professors
Association for Psychological Science
Human Factors & Ergonomics Society
HFES - Carolina Chapter
International Society for Ecological Psychology
Psychonomic Society
Sigma Xi - The Scientific Research Society of North America

## PUBLICATIONS, REPORTS, PRESENTATIONS AND POSTERS

See separate list of publications, reports, papers and posters here.