#### **CURRICULUM VITAE**

# ROBERT J. KOESTER

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#### **EDUCATION**

M.S. Biology, University of Virginia, May 1989. Neuroscience emphasis. B.A. Biology, University of Virginia, May 1985. Neurobiology program.

#### **EMPLOYMENT HISTORY**

# Senior Scientist, Emergency Management Consultant, CEO

dbS Productions LLC, Charlottesville, Virginia

August 1989 - Current

Researcher and consultant on topics of Search & Rescue/Emergency Management, training, research and statistical analysis, and development of performance measures. Expert witness for search & rescue response cases. Principle investigator in collaborative research project analyzing Alzheimer's and related disorders critical wanderers. Co-principle investigator in development of search and rescue artificial intelligence software with SBIR grant from USDA. Creator of International Search & Rescue Incident Database (ISRID), a collaborative project collecting data from seven countries and forty-one different sources involving over 50,000 incidents. Publisher of scientific, medical, and search & rescue texts. Publisher of SARNews. Contractor to National Park Service for developing search & rescue field manual. Contractor to NASA and CSC to develop search and rescue model for World Wind. Deliver lectures and workshops on an international level in seven different countries. Author of several books on emergency management and command.

# Technical Instructor/Principle Investigator

May 1988 - Current

Virginia Department of Emergency Management, Richmond, Virginia

Principle investigator studying Alzheimer's wanderers with a grant from the Virginia Center of Aging. Duties included grant writing, setting research objectives, data collection, interviewing, development of database, administration of cognitive tests, statistical analysis and presentation. Principal investigator in development of a methodology to determine performance measures on the effectiveness of disaster mitigation, preparation, and response. Teach several courses in search and rescue operations. Former member of Virginia Emergency Response Team; served in the positions of State SAR Coordinator, Satellite Disaster Field Office Manager, Operations Officer, and Disaster Recovery Center Manager during disaster activations. Currently, Type I Incident Commander serving on more than 75 multi-organization emergency incidents. Directly supervise and train 5-30 staff officers on lost person/missing aircraft operations (total response 5-1000 persons) with a budget of up to \$500,000 per incident.

Training Specialist October 1999 - Current

Federal Emergency Management Agency, Philadelphia, PA

Project Manager for developing Emergency Management Institute training course on 406 Hazard Mitigation for Public Assistance, GPS for disasters, and Pilot Public Assistance Procedures. National Public Assistance Training Cadre, responsible for Federal Code, regulation, and policy interpretation. Lead training instructor responsible for supervising staff, coordinating and conducting federal training programs specific to FEMA response and recovery operations.

Senior Analyst February 2003 - December 2006

Potomac Management Group, Alexandria, VA

Contractor to US Coast Guard Office of Search and Rescue. Researched, prepared, authored reports on development of ground search and rescue search action plan methodology. Principle investigator of *Sweep Width Estimation for Ground SAR* report. Designed, administered, and conducted experiments on land-based sweep widths around country. Member of project team that refined IDEA (Integrated Detection Experiment Assistant) for use on sweep width experiments.

#### Agency Management Analyst

November 1997 - 1999

Virginia Department of Fire Programs, Richmond, VA

Developed performance measures for agency. Worked directly for Executive Director.

### Senior Laboratory Specialist

Center for Research in Reproduction

University of Virginia, Charlottesville, Virginia

Developed novel experimental protocols, designed patentable research equipment, conducted micro-surgery, and performed experiments in intravital microscopy. Established and maintained laboratory local area network. Installed hardware, software, and integrated computer/video image analysis work station.

Faculty Lecturer II August 1990 - August 1992

Piedmont Virginia Community College, Charlottesville, Virginia

As adjunct faculty taught introductory biology class and lab sections.

**Biology Project Consultant** December 1988 - August 1989

University of Virginia, Charlottesville, Virginia

**Graduate Teaching Assistant** September 1985 - December 1988

Department of Biology

University of Virginia, Charlottesville, Virginia

**Infirmary Director** Summers 1989-1991

Y.M.C.A. Camp Letts, Edgewater, Maryland 1981-82, 1984-86 A.R.E. Summer camp, Rural Retreat, Virginia 1983

TEACHING/INSTRUCTOR POSITIONS

Virginia Department of Emergency Management September 1985 - Current

Incident Commander - Ground, Course Developer, Lead Instructor

Practical Search Operations, Instructor

Managing Land Search Operations, Lead Instructor

Search and Rescue First Responder, Instructor

Field Team Leader, Instructor

Field Team Member, Lead Instructor

SAR First Responder, Lead Instructor

Incident Command System for Law Enforcement, Instructor

Emergency Operations Center - Incident Command System Interface, Lead Instructor

Federal Emergency Management Agency

Public Assistance Crew Leader - Lead Instructor

Public Assistance Operations - I, Lead Instructor

Public Assistance Operations - II, Lead Instructor

Debris Management - Lead Instructor

406 Hazard Mitigation - Lead Instructor, Developer

GPS for Disaster Operations - Developer

Disaster Field Office Orientation - Lead Instructor

Federal Response Plan - Lead Instructor

dbS Productions October 1988 - Current

Lost Person Behavior, Course developer

Fundamentals of Outdoor First-Aid, Course developer

Essentials of Outdoor First-Aid, Course developer

Search Operations for Staff, Course developer

Fatigue, Course developer

Lost Alzheimer's Disease Search Management, Course developer

Piedmont Virginia Community College

Introductory Biology 101, 102, Adjunct Faculty

Introductory Biology Lab 101, 102

August 1992 - September 1995

May 1996 - Current

September 1990 - May 1992

### Department of Biology, University of Virginia

Graduate Teaching Assistant

Biology 101 Introductory Biology Laboratory for non-majors Biology 201-204 Introductory Biology Laboratory for majors

Biology 424 Neurophysiology Biology 817 Neurophysiology

#### **AWARDS AND HONORS**

Lisa Hannon Award (Virginia's highest SAR award), Virginia Search & Rescue Council, 2005 Who's Who in America, 2003
Virginia Department of Emergency Management Service Award, 2001, 2002
Virginia Center for Aging Grant Award (97-2), 1996
Kepner Award (for teaching excellence), Department of Biology, University of Virginia. 1988
Graduate Assistantship, University of Virginia, 1985-1988
First Place Undergraduate Research Symposium, University of Virginia, 1985.

## **EDITORIAL POSITIONS/ADVISORY BOARDS**

Earth & Sky, Advisory Board2007 - CurrentNational Search Dog Alliance, Advisory Board2007 - 2008Wilderness Emergency Medical Services Institute Center1987 - 1995Editor-in-Chief, SARNews2001 -2006

September 1985 - December 1988

#### PROFESSIONAL MEMBERSHIPS

National Association for Search and Rescue (NASAR) International Society to Advance Alzheimer Research and Treatment Society for Science and the Public The Academy of Behavioral Profiling

#### **PUBLICATIONS**

Koester R. J. 2008. Lost Person Behavior: A Search and Rescue Guide on Where to Look - for Land, Air, and Water. Charlottesville, Virginia: dbS Productions.

Koester R. J. 2008. National Park Service Search and Rescue Field Manual. Washington DC: U.S. Department of the Interior. M.S. in draft

Kelly, K., Koester, R. J., St. John, M. 2007. Lost Person Behavior. In *Urban Search: Managing Missing Person Searches in the Urban Environment*, C. Young and J. Wehbring. Charlottesville, Virginia: dbS Productions. Publication date October 2007.

Koester R. J. 2006. Missing and Lost Person Behavior. In *The Textbook for Managing Land Search Operations*, R. Stoffel, 189-229. Cashmere, Washington: Emergency Response International, Inc.

Potomac Management Group. 2006. A Simple Guide to Conducting Ground Search and Rescue Detection Experiments. Washington D.C.: US Department of Homeland Security, United States Coast Guard.

Koester R. J., et al. 2006. In *In Search of the Alzheimer's Wanderer*, M. Warner. West Lafayette, Indiana: Purdue University Press.

Koester R. J., Cooper, D. C., Frost, J. R., Robe, R. Q. 2004. Sweep Width Estimation for Ground Search and Rescue. Washington D.C.: U.S. Department of Homeland Security, United States Coast Guard Operations (G-OPR).

Fuller, G., Johnson, E., Koester, R. J. 2000. Man-Trackers & Dog Handlers in Search & Rescue: Basic Guidelines and Information. Charlottesville, Virginia: dbS Productions.

Koester, R. 1999. Lost Alzheimer's disease search management: A law enforcement guide to managing the initial response and investigation of the missing Alzheimer's disease subject. Charlottesville, Virginia: dbS Productions.

Koester R. J. and Stooksbury, D. E. 1998. The Lost Alzheimer's and Related Disorders Subject: New Research and Perspectives. *Response 98 NASAR Proceedings*,165-181. Chantilly, Virginia: National Association of Search and Rescue.

Koester R. J. and Colestock, H. E. 1998. Performance Measurement in Emergency Management: One Government's Experience. *Proceedings of the 5th Annual Conference of the International Emergency Management Society*, May 19-22. Washington D.C.

Koester R. J. 1997. "Fatigue and Search and Rescue" Response 15:4:18-24.

Koester R. J. 1997. Fatigue: Sleep Management During Disasters and Sustained Operations. Charlottesville, Virginia: dbS Productions.

Koester R. J. 1997. Incident Commander for Ground Search and Rescue. Charlottesville, Virginia: dbS Productions.

Koester R. J. 1996. Field Operations Guide for Search & Rescue: Standard Operating Guidelines for Search & Rescue using the Incident Command System. Charlottesville, Virginia: dbS Productions.

Koester R.J. & Stooksbury D. E. 1995. "Behavioral Profile of Possible Alzheimer's Disease Subjects in Search and Rescue Incidents in Virginia." *Wilderness and Environmental Medicine* 6:34-43.

Koester R. J. 1993. Dissection of the Fetal Pig. In Organismal Biology: A Laboratory Introduction, ed. J. L. Riopel. Dubuque, Iowa: Kendall/Hunt Publishing Company.

Koester R.J. and Stooksbury D. E. 1992. "Lost Alzheimer's Subjects-Profiles and Statistics. Response 11:4:20-26.

Koester R.J. et. al. 1992. Outdoor First-Aid. Charlottesville, Virginia: dbS Productions.

Koester R.J. et. al. 1991. Wilderness and Rural Life Support Guidelines. Charlottesville, Virginia: dbS Productions.

- "Lost Persons Behaviour" Keynote address at Emergency Management Conference Rescue 08. Melbourne, Austrailia. July 2008
- "Lost Person Behavior Workshop" presented at Colorado SAR Board SARCON 2008. Gunniston, CO. July 2008.
- "Lost Person Behavior Updates and Advances" presented at National Search and Rescue Conference Response 08. Colorado Springs, CO. May 2008
- "Fatigue," "Lost Person Behavior" presented at Washington State SAR Conference 2008 Washington Emergency Management, Cashmere, WA. May 2008.
- "Lost Person Behaviour and ISRID" presented at SARSCENE 2007 Canadian Search and Rescue Secretariat. Victoria, Canada. October 2007.
- "International Search & Rescue Incident Database Results" presented at Response 2007 National Association for Search and Rescue. Charlotte, North Carolina. June 2007.
- "International Search & Rescue Incident Database Results" presented at Washington State SAR Conference. Crystal Mountain, Washington. May 2007.
- "Learning from the Past: Looking to the Future" Keynote address presented at New Zealand Land SAR Conference 2006. Dunedin, New Zealand. November 2006.
- "Alzheimer Search Management Protocols" presented for New Wales Police. Melbourne, Australia. November 2006.
- "Reflex Tasking, Initial Incident Response Plan" presented at International ICE-SAR 2006 Conference. Reykjavik, Iceland, October 2006.
- "International Search & Rescue Incident Database first report" presented at Response 2006 National Association for Search and Rescue Conference. Austin, Texas. June 2006.
- "Lost Person Behaviour Profile Update Workshop" and "Report on detection experiments for Ground SAR" presented at SARSCENE 2005 Canadian Search and Rescue Secretariat. Charlottetown, Prince Edward Island, Canada. October 2005.
- "Alzheimer's Critical Wandering" presented at Mayo Clinic Research Symposium, Jacksonville, Florida. January 2005.
- "Incident Commander", Despondent Profile, Lost Person Behavior, presented at New Zealand SAR Conference. New Zealand. October 2004.
- "Lost person behavior" and "Sweep Width Research" presented at Response 2004 National Association for Search and Rescue Conference. Lansdowne, Virginia. June 2004.
- "Updated Alzheimer's Statistics" presented at UK Mountain Rescue Council Conference. Bangor, Wales. September 2004.
- "Alzheimer's Profile" presented at Alzheimer's Workshop. Sponsored by Australian New Wales Police. Melbourne, Australia. August 2003.
- "Alzheimer's Cases" presented throughout New Zealand. Sponsored by New Zealand Land Search and Rescue and Search and Rescue Institute of New Zealand. July-August 2003.
- "Alzheimer's Seminar" presented at SARSCENE 2002 Canadian Search and Rescue Secretariat. Halifax, Nova Scotia, Canada. September 2002.
- "Alzheimer's Profiles" presented at Response 01 National Association for Search and Rescue Conference. Colorado Springs, Colorado. May 2001.
- "Urban Alzheimer's Wandering" presented at the Washington State SAR Conference. Seattle, Washington. May 2001.
- "Behavioral and Statistical Profile of Lost ADRD Subjects in Virginia" presented to the Governor's Commission of Alzheimer's disease and related disorders. Richmond, Virginia. November 2000.

"Behavioral and Statistical Profile of Lost Alzheimer's Subjects in Virginia." presented at the Alzheimer's and Related diseases Research Award Fund: Discovering Treatments and Improving the Care of Virginians with Dementia. Richmond, Virginia. June 2000.

"Behavioral profile of Psychotic and mentally retarded lost individuals" presented at Response 99 - National Association for Search and Rescue Conference. Orlando, Florida. May 1999.

"Updated lost Alzheimer's and Related Disorders behavioral profiles" and "Fatigue Management" presented at SARSCENE'98 - Canadian SAR Secretariat Conference and "New behavioral statistics on lost psychotics and mentally retarded subjects" presented at the Fourth Syrotuck International Symposium in conjunction with SARSCENE'98. Banff, Alberta, Canada. September 1998.

"Updated lost Alzheimer's and Related Disorders behavioral profiles" and "Fatigue Management" presented at the New York SAR Conference. September 1998.

"Searching for the lost Alzheimer's and Related Disorders Subject" presented at Search and Rescue/Disaster Response 98. Nashville, Tennessee. June 1998.

"Lost Person Behavioral Updates: The Alzheimer's Case" presented at Response 98 - National Association of Search and Rescue Conference. Portland, Oregon. May 1998.

"Performance Measurement in Emergency Management: One Government's Experience" presented at The International Emergency Management Societies disaster & Emergency Management: International Challenges for the Next Decade, 5th Annual Conference. Washington, D.C. May 1998.

"SAR resource mixing & Operations as the Incident Commander" presented at The Northeast Regional SAR Conference. Fatimia Camp, New Hampshire. May 1998.

"Prospective Alzheimer's and Related Disorders Wandering Research" presented at the Second Syrotuck Symposium in conjunction with SARSCENE 97. Sault Saint Marie, Ontario, Canada. October 1997.

"New prospective Alzheimer's Research results" presented at the Berkshire SAR Conference. Berkshire, New Hampshire. September 1997.

"Fatigue and Search and Rescue" and "Updated Alzheimer's and Despondent Profiles" presented at Response 97 - National Association of Search and Rescue. Richmond, Virginia. May 1997.

"Behavioral and Statistical Analysis of Lost Alzheimer's Disease Patients Requiring a Search & Rescue Response" presented at The Gerontological Society of America Symposia. Washington, D.C. Nov. 1996.

"Behavioral and Statistical Profile of the Lost Alzheimer's and Related Disease Subjects in Virginia" presented to The Virginia Bloodhound Association. Winchester, Virginia. May 1996.

"Updated Alzheimer's Statistics and Future Research" presented at William G. Syrotuck Symposium on Search Theory and Practice. Denver, Colorado. May 1996.

"Air Crash Analysis" presented at the Helicopter Survival Symposium. Charlottesville, Virginia. 1995.

"Initial Actions for Law-Enforcement Searching for the Lost Alzheimer's Disease Subject" presented to Blue Ridge Chapter of the Alzheimer's Association's Police Awareness Conference. 1994.

"Outdoor First-Aid" presented at National Police Bloodhound Association. Winchester, Virginia. 1993.

"Lost Subject Profile for Alzheimer's in Virginia" presented at the National Association for Search & Rescue. Phoenix, Arizona. 1992.

Appalachian Search & Rescue Conference Inc.

Area Command Authority, Incident Commander

Board of Directors

Other positions held: Chairman, Vice-Chairman

April 1985 - 2007

September 1981 - Present

SAR Mission Activity: Incident Commander - 101 Searches Incident Staff - 38 Searches Field Team Leader - 32 Searches

Virginia Search and Rescue Council

Delegate January 1986 - Present President January 1993 - Present

Spearheaded legislative changes Virginia Code to enhance SAR response. Assisted in the development of Virginia Annex 1-AA, Virginia Search and Rescue Council SOP and development of state standards.

Charlottesville Albemarle Rescue Squad WEMT-CT

April 1996 - Present

Virginia Department of Criminal Justice Services Alzheimer's Committee

June 1998 - Present

Governor's Task Force on Disaster Planning

October 1987 - October 1988

# **EXPERT TESTIMONY**

Testified as an expert at trail or by Deposition

Reubin Matticx v. Emmanuel Care Home Inc et al. Pima County Superior Court no. C-2004-4912

Robert E. Fee Law Office of Robert E. Fee 4501 East Grant Rd Tucson, AZ 85712-2616