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Education:

Ph.D. 1991 University of California, Berkeley CA
M.S. 1986 University of Washington, Seattle WA
B.S. 1984 Colorado State University, Fort Collins, CO

Employment:

Period	Title	Employer
2000-present	Research Forester	USDA For. Serv. Missoula Fire Sciences Laboratory, Missoula, MT
1993-2000	Research Scientist	Systems for Environmental Management, Missoula, MT
1991-1993	Fire Ecologist	Research Office, Sequoia National Park, Three Rivers, CA
1988-1991	Consultant	Wildland Resource Mgt, Walnut Creek, CA 94596
1987-1991	Research Asst.	Department of Forestry, University of California Berkeley, CA
1984-1986	Research Asst.	College of Forest Resources, University of Washington, Seattle WA
1982-1984	Fire Fighter	Bureau of Land Management, Canyon City, CO

Publications

- Miller, C., **M Finney**, S McAllister, E Sluder, Michael Gollner. 2017. Investigating coherent streaks in wildfires via heated plates in crosswind. *Fire Safety Journal*
- Tang, Wei, DJ. Gorham, **M.A. Finney**, S McAllister, J Cohen, J Forthofer, and MJ Gollner 2017. An experimental study on the intermittent extension of flames in wind-driven fires. *Fire Safety Journal*
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- McAllister, S.S., **M.A. Finney**. 2015. Burning Rates of Wood Cribs with Implications for Wildland Fires. *Fire Technology*. Published online DOI: 10.1007/s10694-015-0543-5
- Finney, M.A., McAllister, S., T. Maynard, I. Grob. 2015. A study of wildfire ignition by rifle bullets. *Fire Technology* DOI: 10.1007/s10694-015-0518-6.
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Honors and Awards (since 2005)

2005, August. Certificate of Appreciation “for providing critical guidance to the LANDFIRE program to ensure that LANDFIRE wildland fuel products were of highly quality and met the formats required for successful implementation in the FARSITE fire spread model”. Award presented by LANDFIRE program manager Kevin Ryan.

2005. November. Award for Best Science Delivery Process or Tool, presented at the Joint Fire Sciences Principal Investigators Workshop in San Diego. This award recognized the delivery of FlamMap software and the WindWizard wind modeling software for fire management uses. Presented by Sue Conard, WO Research Staff, and Erik Berg (JFSP director).

2005. November. Certificate of “Commendation for outstanding performance and invaluable assistance in support of the activities of the Environment and Natural Resources Division” of the Department of Justice. This was presented by Cynthia Huber of the DOJ for expert witness work on behalf of the Forest Service in litigation on fire hazard reduction in the Black Hills National Forest.

2006. September. Certificate of Merit awarded by the San Dimas Technology Development Center for “significant contributions during the planning and testing phase of the Black Powder Project”. This award was given for organization and design of a study (originated by San Dimas) examining ignition potential from the cotton patches used for shooting round lead bullets from a black powder rifle (see Factor 4.D. publication #73).

2008. November. Chief’s Honor Award for Excellence in Science and Technology. This group award was presented to group leaders (Mark Finney, John Szymoniak, and Dave Calkin) on behalf of the entire team for our efforts to develop and deploy the Wildland Fire Decision Support System (WFDSS). <http://wfdss.usgs.gov>

2010. September. Award for contributions to the Cohesive Strategy and Fire Program Analysis on behalf of the program lead Danny Lee (SRS).

2013. May. Award for “professionalism and dedication as a team member of the Rocky Mountain Research Station’s Fourmile Canyon Fire Assessment Team”.

2013. December. Regional Forester’s Award in the Northern Region (R1) for “Excellence in Science and Technology”. Mark Finney’s science leadership in fire research and development (R&D) is multidimensional, and includes his personal research on fire behavior and combustion.

2013. December. Award by the Society for Risk Analysis for one of the “Best Papers of 2013” published in the journal *Risk Analysis* (see Factor IV, publication # 109).

2014. December. Chief’s Honor Award for Excellence in Science and Technology. Individual award in recognition of Fire Behavior Science Driving Risk-based Fire Management Decision-making presented in Washington DC, December 5th, 2014.

2016. January. Award for Best Scientific Paper by the Rocky Mountain Research Station. Award recognizes the breakthrough into understanding physical processes in wildfire spread reported in “Role of Buoyant Flame Dynamics in Wildfire Spread”

Current Research Activities

- Leads National Fire Decision Support Center on Fire Spread Fundamentals. Understanding how wildfires spread is addressed with laboratory and field experiments to separate effects of convection from radiation on fuel particle ignition and to understand rapid moisture losses in live fuels during ignition and combustion.

- Lead for research team in charge of implementing and testing operational models of wildland fire behavior for two National interagency systems. The Wildland Fire Decision Support System (WFDSS, <http://wfdss.nwcg.gov>) is used to perform fire modeling and quantitative risk analysis for large wildland fires in the CONUS and Alaska.
- Research lead on fire behavior modeling in wildfire risk assessment. Wildfire risk derives principally from spatial processes driving large fires and research addresses methods of estimating and validating simulation of fire probability distributions for actuarial risk combined with econometric modeling.
- Team lead for research and development of national Wildland Fire Investment Planning System (WFIPS). Software designed for spatial modeling of initial attack, fuel treatment effects, and large fire costs and impacts for preparing budget alternatives for five federal land management agencies.
- Research lead for ignition by firearms and explosives. Wildfires started by target shooting and recreational explosives have become widespread in the western US and laboratory and field experiments are conducted to understand physical mechanisms of ignition.