PAUL T. ROBERTS
Executive Vice President
Chief Scientific Officer
Corporate Quality Assurance Officer

Sonoma Technology, Inc.

Educational Background

Ph.D., Environmental Engineering Science, California Institute of Technology
M.Ch.E., Chemical Engineering, Rice University
B.A., Chemical Engineering, Rice University

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Professional Experience

Dr. Roberts joined STI in 1986. He has designed and managed many air quality field, data management, and data analysis projects. Most of these projects involve using field data and analysis methods to understand important meteorological, air quality, and exposure phenomena; to develop, apply, and evaluate meteorological, photochemical, and exposure models; and to evaluate the effectiveness of ambient air quality and meteorological networks in meeting various regulatory requirements. These projects have focused on a range of issues, including ozone, PM_{10} and $PM_{2.5}$, visibility, toxics, carbon monoxide (CO), and meteorology. Project types include near-roadway, regional, and exposure studies.

Dr. Roberts is leading the U.S. 95 MSAT (Mobile Source Air Toxics) Near-roadway Study sponsored by the Nevada Department of Transportation in Las Vegas and the air quality and meteorological measurements for a study of near-roadway emissions from construction equipment for the Arizona Department of Transportation. He also led a study of recreational boat CO emissions and exposure at Lake Havasu City in Arizona.

Dr. Roberts designed and managed regional air quality and meteorological field studies in many areas of the Country, including California (the South Coast Air Basin [Los Angeles], the San Joaquin Valley, Sacramento and the Sacramento Valley, the San Francisco Bay Area, and the southeastern desert), Arizona, Nevada, Southeast Texas [Houston], El Paso and Ciudad Juárez, the Texas and Louisiana Gulf Coast and the Gulf of Mexico, the area around Lake Michigan, and the northeastern U.S. from Virginia to Maine. He also performed and led data analysis efforts for these field studies, including evaluations of emissions, meteorological and chemical model results.

He also designed and managed the field exposure measurements for a long-term epidemiologic study in Southern California and for the Fresno Asthmatic Children's Environment Study (FACES). Dr. Roberts co-led the development and presentation of a three-day PAMS data analysis workshop and a PM workshop for EPA. He has done air quality and exposure work in cooperation with governmental, university, and industrial organizations in Cairo, Egypt; Jamaica; Ciudad Juárez, Mexico; and Bangkok, Thailand.

From 1981 to 1986, Dr. Roberts was chairman of several oil-industry trade association committees that sponsored air quality research, was a consultant to the environmental affairs group of Chevron, and testified at Federal hearings. From 1975 to 1986, he planned and directed research and development projects at Chevron Research Company and helped apply the results to operating plants in various Chevron refineries. He also led Chevron's process research efforts on tar sands and coal gasification and was involved in numerous methods development and methods evaluation projects.

In graduate school, Dr. Roberts developed the flash vaporization technique for measuring nanogram levels of particulate sulfur and carried out research on the transformation of SO_2 to particulate sulfur in Los Angeles. He also participated in the ARB ACHEX and the EPA RAPS.

Dr. Roberts was a member of the California Inspection and Maintenance Review Committee in 1994-1995, has served on various EPA peer-review panels since 1995, including the external Peer-Review Panel for EPA's "Air Quality Criteria for Carbon Monoxide" published in 2000 and the external Peer-Review Panel for Carbon Monoxide 2008-2010, and is a member of the Air & Waste Management Association and the American Association of Aerosol Research. Dr. Roberts is currently an Affiliate in the Department of Atmospheric Sciences at Colorado State University. He is also an expert on Victorian architecture in the San Francisco Bay Area.

See http://www.sonomatech.com/ResPub/PTRpub.pdf for a list of publications.