



ShihMing Huang

*Air Quality Scientist
Project Manager / Team Leader*

Mr. Huang joined STI in 2008 and is a team leader in the Fire, Fuels, and Remote Sensing Group. His projects focus on investigating the temporal and spatial trends, characteristics, and variations of wildland fire activity, smoke emissions and transport from fires, and ambient air pollution. He integrates ground-based, remotely sensed, and modeled data sets to answer complex air quality questions. He also leads software projects to develop smoke modeling tools.

Currently, Mr. Huang is collaborating with the U.S. Environmental Protection Agency (EPA) on a study that aims to quantify the impacts of smoke on health and to improve public health communication through citizen science. He is leading a team of software engineers to design and develop a mobile application to collect and distribute fire, smoke, and health information. Mr. Huang also continues to work with clients in the USDA Forest Service and the Canadian government on engineering and improving wildland fire emissions and smoke modeling products such as the BlueSky Playground and the BlueSky Canada system.

In 2016, Mr. Huang led the development of the wildland fire sectors of the 2014 National Emissions Inventory for the EPA, working with scientists and stakeholders in different government agencies to gather fire information and refine technical approaches in estimating emissions. Further, he directed the effort to create the 2015 wildland fire emissions inventory for the United States, Canada, and Mexico.

In 2015, Mr. Huang helped two local fire districts meet their vegetation management and risk management needs pertaining to Community Wildfire Protection Plans by developing high-resolution (5 m) custom fuel model maps using LiDAR, aerial imagery, and other data sets. He also worked on two projects funded by the Joint Fire Science Program, analyzing wildfire smoke impact potential across the contiguous United States, and evaluating the suitability of numerous fire activity data sets for developing emissions inventories.

In addition, Mr. Huang has made valuable contributions to EPA's AirNow program. Domestically, he has led the development, testing, and technical documentation of the AirNow software, as well as a NASA-sponsored economic analysis to determine the cost savings of incorporating NASA satellite data to supplement ground-based observations. Internationally, he has helped establish a partnership with the Shanghai Environmental Monitoring Center and Focused Photonics, Inc., in Hangzhou, China, by delivering trainings on AirNow software in multiple Chinese cities and providing system localization support.

Mr. Huang is proficient in ArcGIS, Tableau, SYSTAT, SPSS, and Grapher. He is experienced in programming with Python, R, SQL, Visual Basic, and FORTRAN.

Education

- MS, Environmental Science (with distinction), California State University, Chico
- BS, Biological Science, San José State University

Memberships

- International Association of Wildland Fire
- American Geophysical Union

For a list of publications, see sonomatech.com/ResPub/SMHpub.pdf.