YUAN DU
Emission Inventory Specialist

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Educational Background

M.S., Civil Engineering, University of Tennessee, Knoxville
B.S., Environmental Engineering, Tsinghua University

Professional Experience

Ms. Du joined STI's Emission Assessments group as an Emission Inventory Specialist in 2009. Her primary responsibilities include the preparation and validation of emission estimates, emissions modeling, data analysis, the production of summary and descriptive statistics and graphics, and the documentation of results. Ms. Du's contributions to the preparation of emission inventories have included the estimation of emissions from construction equipment at a road widening project in southern Arizona and the development of national wildland fire emission inventories and agricultural fire activity databases for 2006-2008 in support of the U.S. Environmental Protection Agency's (EPA) preparation of the National Emission Inventory. Ms. Du has also contributed to emission inventory improvement projects, including comparisons between ambient monitoring data and gridded emissions estimates for the Upper Midwest. Ms. Du's emissions modeling experience includes the preparation of emission inputs for $PM_{2.5}$ modeling in the Sacramento Valley and the Midwestern U.S.

Ms. Du is an experienced user of the Microsoft Office Suite; emission inventory development and processing tools such as the Sparse Matrix Operator Kernel Emissions Modeling System (SMOKE) and EPA's MOBILE6 and NONROAD mobile source models; and dispersion models such as the Industrial Source Complex Short Term model version 3 (ISCST3), the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee (AERMIC) Dispersion Model (AERMOD), and California Puff model (CALPUFF). Ms. Du is also a skilled user of GIS applications, the BlueSky Smoke Modeling Framework, and data analysis tools such as SYSTAT and VOCDat.

While pursuing an M.S. degree at the University of Tennessee, Knoxville, Ms. Du worked as a Research Assistant in the Department of Civil and Environmental Engineering, where she applied the NCAR/PSU Mesoscale Model version 5 (MM5) and Community Multiscale Air Quality (CMAQ) models to air quality studies in both the United States and Asia. She also evaluated MM5 model performance for meteorological modeling in China for 2006 and compiled the final report for the U.S. EPA's Joint Economy Study project.

As part of her graduate thesis, Ms. Du developed an ArcGIS- and FORTRAN-based process for preparing CMAQ-ready Asian emissions data for the Pollutants in the Atmosphere and their Transport over Hong Kong (PATH) project, sponsored by the Hong Kong Environmental Protection Department. Ms. Du also generated the spatial surrogate files and Biogenic Emission Landcover Database (BELD3) land cover data for an emissions modeling application for the Pearl River Delta region in China.

Memberships

Air and Waste Management Association

See STI's website, http://www.sonomatech.com/resumes.htm, for a list of publications.