

YUAN DU

Emissions Inventory Specialist



Educational Background

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

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Professional Experience

Ms. Du joined STI's Emissions Assessments group as an Emissions 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, the development of a mobile source emissions inventory for the U.S. Environmental Protection Agency's (EPA) Cleveland Multiple Air Pollutant Study and the national wildland fire emission inventories and agricultural fire activity databases for 2006-2008 in support of the EPA's preparation of the 2008 National Emissions 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 United States.

Ms. Du is an experienced user of the Microsoft Office Suite; emissions inventory development and processing tools such as the Sparse Matrix Operator Kernel Emissions Modeling System (SMOKE) and EPA's MOVES and NONROAD mobile source models; and dispersion models such as the Industrial Source Complex Short Term model version 3 (ISCST3), the American Meteorological Society/EPA 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 & Waste Management Association