YOUNG-SOO CHANG

Atmospheric Sciences Section
Environmental Science Division
Argonne National Laboratory

Education:

Ph.D.	University of Iowa, Chemical Engineering, 1987
M.S.	University of Iowa, Chemical Engineering, 1984
B.S.	Seoul National University, Chemical Engineering, 1977

Professional Experience:

1988-Present   Environmental Systems Engineer
Environmental Science Division
Argonne National Laboratory

Responsible for air pollution modeling and impact assessment, including the analysis of meteorological/climatological and ambient air quality data, preparation of emission inventories, air quality modeling, and development of mitigative measures. Develops air quality models and associated algorithms, and model application approaches. Conducts noise propagation modeling and noise impact assessments for major industrial facilities. Responsible for human health risk and other impact assessments associated with contaminated sites and accidental releases of toxic air pollutants.

Summary of Previous Experience:

1987-1988   University of Iowa, Iowa City, Iowa

Developed a regional-scale air quality model, the Sulfate Transport Eulerian ModelII (STEM-II), which is one of the most advanced chemical/transport/removal models currently available. Used the model to conduct an extensive analysis of long-range transport of photochemical oxidants and acidic species over central Japan, in cooperation with the National Institute for Environmental Studies in Japan. Developed a group of subroutines for an advanced chemistry mechanism for use in a 3-Dimensional Mesoscale model (CALGRID) developed by California Air Resources Board.

1977-1982   Agency for Defense Development, Taejon, Korea

Served as plant manager for manufacturing propellants and explosives on pilot-scale and production-scale levels. Responsible for measuring mechanical properties of propellants and explosives, particle size analysis and control for the components of propellants and explosives, and computer analyses of shell trajectories.

Research Interests:

Gaussian plume and dense gas dispersion modeling
Long-range transport/chemistry/removal modeling
Emission inventories and associated uncertainty analysis
Noise propagation modeling and annoyance prediction analysis
Human health risk assessment

Professional Activities:

Air and Waste Management Association
American Institute of Chemical Engineers
Korean-American Scientists and Engineers Association
Korean Air Pollution Research Association
Noise and Vibration Committee
Fugitive Emissions Committee
Risk Assessment/Management Committee

Publications:

Author or co-author of 80+ journal, report, and conference publications and presentations.