

EDITORIAL

This special issue is dedicated to the memory of Dr. Frank Pasquill, who developed many of the theories and carried out several of the field experiments on which current atmospheric turbulence and dispersion models are based. Most of the manuscripts in this special issue are expanded versions of various papers presented at the session in memory of Dr. Frank Pasquill at the Ninth Conference on the Applications of Air Pollution Meteorology held in Atlanta on 28 January 1996. Frank Pasquill's research activities and published papers and books touched on all topics covered in the papers presented at the conference and published in this special issue. For example, he developed innovative theories of evaporation that are expanded upon by Businger and Huang in their papers. His dispersion coefficient formulations and stability classification scheme form the basis of current U.S. Environmental Protection Agency models discussed by Turner, by Schwede and Paumier, and by Atkinson et al. His desire for straightforward dimensional analysis based on fundamental physical principles is exemplified in the dispersion parameterizations suggested by Du and Venkatram. He emphasized the need to consider the effects of turbulent fluctuations and their associated timescales on dispersion, as expanded upon by Thompson, by Weil et al., and by Sykes and Gabruk. In fact, most ideas in these 15 papers can be traced back to concepts clearly described by Frank Pasquill. It is hoped that this set of papers will further inspire readers to continue the development of the physical concepts that intrigued Frank Pasquill over the course of his career.

Steven R. Hanna
Chief Editor