FOREWORD

Since 1982, the U.S. Mine Ventilation Symposia series have been held every two to three years usually and by a university, except for the 8th Symposium which was deliberately scheduled to avoid the International Mine Ventilation Congress held in 1997. The number of papers included in the Proceedings have grown from 31 for the First Symposium to nearly 100 this year.

As in previous Symposia, a count of the papers presented clearly highlights the important issues facing the ventilation community today: dust (12), methane and methane drainage (11), system and system optimization (10), longwall (8), mine fans (7), modeling (6), and diesel (5). At the First Symposium, Dr. Howard Hartman pointed how pervasive the use of computers had been on mine ventilation design; and this phenomenon has only intensified in recent years. This year, over 20 papers are devoted to or encompass the use of computers in modeling systems (8) and optimization (5), as well as monitoring and controlling ventilation circuits (7). In addition, Dr. Rudolf Greuer described the practice of ventilation planning as it was 50 years ago – which proves to be helpful in reviewing where we have been and thus assist us to plan better for the future.

There are also several new features which have been introduced this year that are worth mentioning: the extensive use of the websites, the availability of CD-ROM version of the Proceedings, and the Diesel Workshop designed to address the increasingly important diesel powered equipment in underground mines. Another serious problem discussed is the significant depletion of ventilation expertise in the mining industry, as well as among the mining engineering programs in the U.S., as pointed out by Dr. Larry Grayson in his keynote address. A Ventilation Education Forum has been set aside to specifically address this issue.

With higher tonnage being produced at mines, the increasing use of diesel-powered equipment, and the working of deeper deposits, ventilation design has become an integral part of the total economic considerations of mine planning. Anybody can solve a ventilation problem by over-specifying, but it takes a smart ventilation engineer to perform a good ventilation job with just the right amount of equipment at minimum cost. Without an effective ventilation system, no underground facility can operate safely. This presents us with many challenges and ventilation engineers must play their part in making significant changes in underground mining for the better.

This will be the last U.S. Mine Ventilation Symposium in this century, and I am looking forward to an intellectual and rewarding discussion of ideas and experiences.

Finally, I would like to thank the Organizing Committee for their support, the authors who worked hard to meet the deadlines for writing high quality papers, the Paper Review Committee for reviewing and editing the papers, Terri Boswell for her help in putting the Proceedings together, and more importantly, my family for their understanding and support while I performed the duties of the Symposium.

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Jerry C. Tien
Symposium Chairman