PREFACE

Because of the COVID-19 pandemic, the decision was made to cancel the face-to-face component of the 39th International Conference on Ground Control in Mining (ICGCM 2020) in order to protect the health of all participants. The papers submitted to the conference received extensive peer review and are published in these proceedings. Selected authors were invited to work with SME to present their research as webinars throughout the second half of 2020 or at the 2021 SME annual conference. The editors, organizing committee, and SME staff extend a warm thank-you to all the authors who created high-quality papers during this difficult time.

The conference was initially conceived in 1981 by Syd Peng to bring together members of the mining community in a forum where diverse ground control experience and research can be shared. The conference has been held annually since that time and has a rich history of advancing ground control techniques to its current stage. It has provided a unique platform for researchers, regulators, and operators to present, exchange ideas, and discuss topics that are unique, challenging, and/or require immediate solutions. The conference has covered every aspect of ground control in mining. The conference has been attended by researchers from all the mining countries around the world. The papers presented in the conference are accessible online at no cost and represent a comprehensive collection of technical papers.

For these proceedings, 37 papers are included across 10 subject areas including Fundamental Ground Control Studies, Dynamic Failure in Underground Coal Mines, Advancements in Geotechnical Analysis Methods, and Advances in Remote Sensing. The proceedings cover a broad range of ground control issues across all commodities and mining locations. Highlights of these proceedings include a publication by Essie Esterhuizen entitled "Assessing Support Alternatives for Longwall Gate Roads Subject to Changing Stress" in which two regression equations are discussed that could be used to estimate the likely roof deformation and height of roof yield caused by longwall-induced stress changes. This information was used to assess support capacity and yield requirements of standing supports. Khaled Mohamed's paper titled "Preliminary Rib Support Requirements for Solid Coal Ribs Using a Coal Pillar Rib Rating" demonstrates a new, easy to use mapping tool to measure the bearing capacity of ribs in underground coal mines. Peter Zhang's paper entitled "The Current Perspective of the Pennsylvania 1957 Gas Well Pillar Study and Its Implications for Longwall Gas Well Pillars" demonstrates research showing that the guidelines in the 1957 study are found to be reasonably appropriate for pillars protecting conventional gas wells in both room-and-pillar mining and longwall mining areas under shallow overburden depths up to 700 ft. However, they prove to be inadequate for gas well pillars under deep cover.

We thank all the primary technical reviewers, peer reviewers, and authors for their contributions and dedication to these proceedings. In addition, the editors extend appreciation to the SME staff for their hard work, patience, and enthusiastic support. We also thank our sponsors for their continued support in the success of this conference. We look forward to a very exciting ICGCM 2021.

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