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**Musingwini, C.**

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# Journal Comment

## Mine Planning and Equipment Selection (MPES 2015)

The Southern African Institute of Mining and Metallurgy (SAIMM) hosted the *23rd International Symposium on Mine Planning and Equipment Selection (MPES 2015)* at the Sandton Convention Centre in Johannesburg from 9 to 11 November 2015. This was the first time that South Africa has hosted the MPES in its 25-year history. This conference's theme was '*Smart Innovation in Mining*' in order to recognize technological innovations and new ideas that are required to prepare the industry for the mine of the future.

This special edition of the *Journal* contains a selection of papers from MPES 2015 that discuss issues and present ideas on innovation that span the mine value chain. The world is still experiencing depressed commodity prices since the global financial crisis of mid-2008, and the industry continues to face downsizing challenges. It is imperative that innovation becomes second nature to the mining industry if we are to survive and emerge stronger from the current economic abyss. Papers in this edition of the Journal provide some insight into ideas applicable for innovation.

The paper on productivity is highly relevant in the current context. Mining productivity has declined by nearly 50% since 2001, according to the US Bureau of Labour Statistics and a McKinsey Report published in May 2015. Two of the papers examine issues pertaining to mechanization in the hard rock mining environment – but, is mechanization a panacea for the woes that bedevil the industry?

Uncertainty in mining systems is covered in two papers that discuss the use of simulation as a handy tool to address uncertainty in order to better manage risk. This approach supports the notion that it is better to be approximately right than to be precisely wrong. A major challenge facing simulation projects is how to communicate a wide range of answers where a single answer is required for decision-making. We need to apply our minds to how we can resolve this challenge.

Two other papers discuss economic or financial aspects related to mining. These are also pertinent in the realm of mine planning and equipment selection because we need to mine economically if we are to sustain our operations.

Sometimes we need to go back to basics to be innovative. This is where the two papers on improving our understating of rock masses and rock behaviour are relevant. Arguably, we occasionally need to take that one step back in order to make that leap forward. This takes us forward to the vision of the mine of the future.

What do we need as an industry to prepare ourselves for the mine of the future? Certainly, it will be business unusual in the mine of the future. Innovation and technology as articulated by the papers in this edition of the *Journal* are critical for propelling the mining industry forward, but they also bring an attendant increase in the complexity of mining organizations in terms of data and systems integration. We are not, and will not in the future, be immune to 'Big Data' challenges. As can be gleaned from the paper on integrating load and haul equipment selection and replacement decisions across multiple periods, we will have to be smarter about integrating our systems to facilitate decisions across multiple periods and organizational silos.

It is my hope that everyone will find the papers in this volume insightful as they contribute towards innovative ideas that are required to imagine, and bring to reality, the mine of the future.

**C. Musingwini**
*Organizing Committee Chairman*