Introduction

The fifth International Conference on Concrete Repair, Rehabilitation and Retrofitting (ICCRRR 2018) was held in Cape Town, South Africa, from 19-21 November 2018. The Conference was the latest in a sequence of ICCRRR International Conferences (Cape Town 2005, 2008 and 2012, Leipzig 2015). The organization was a collaborative venture of the University of Cape Town in South Africa and the Karlsruhe Institute of Technology (KIT) in Germany.

Across the globe, increasing amounts of national construction budgets are spent on condition assessment, maintenance, monitoring, repair and strengthening of concrete structures. In light of this, substantial progress has been made in understanding concrete deterioration mechanisms, non-destructive assessment technologies, and repair and rehabilitation technologies. A large share of international research efforts in structural and materials engineering are dedicated to these topics, and we believe that international events such as the ICCRRR can contribute substantially to developing and implementing suitable solutions to address the above issues.

ICCRRR 2018 has received excellent support by researchers and practitioners from around the world, with authors being drawn from numerous research and industrial organisations. These Proceedings contain papers presented at the conference, classified into a total of 11 sub-themes which can be grouped under five main themes: (i.) Concrete durability aspects, (ii.) Condition assessment of concrete structures, (iii.) Reinforcement corrosion modelling and prevention, (iv.) Concrete repair, rehabilitation and retrofitting, and (v.) Concrete technology and materials processing. Only original contributions were considered for inclusion in the conference proceedings and all papers submitted were subjected to a full process of peer review. The review of manuscripts was undertaken by members of the International Scientific Advisory Board and other identified leading experts, acting independently on one or more assigned manuscripts. This invaluable assistance, which has greatly enhanced the quality of the Proceedings, is gratefully acknowledged. The full conference papers are published by MATEC Web of Conferences, a provider of open-access proceedings in Materials Science, Engineering and Chemistry. This was done in order to give the papers better accessibility in the international research and industry communities. This hard copy of the proceedings contains abstracts of all accepted papers, in order to provide an overview on the topics covered and to guide conference participants in selecting technical sessions that are of most interest to them.

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- RILEM
- SAICE

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Finally, the editors wish to thank the authors for their efforts at producing and delivering papers of high standard. We are sure that the Proceedings will be a valued reference for many working in this important field, and that they will form a suitable base for discussion and provide suggestions for future development and research.

M G Alexander
 H Beushausen
 F Dehn
 P Moyo

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