

Preface

This two volume proceedings contains six keynote contributions and 194 peer-reviewed papers that were submitted to the 23rd Australasian Conference on the Mechanics of Structures and Materials (ACMSM23). ACMSM23 was hosted by Southern Cross University (SCU), Australia, and was held in Byron Bay as well as the Lismore campus of SCU from 9-12 December 2014.

The inaugural ACMSM was hosted by the University of New South Wales, Australia, in 1967 and the proceedings contained 15 submissions arising from Australia, New Zealand and India. Since then, ACMSM has usually been held biennially in Australia and New Zealand and it has certainly grown in stature and reach. This 23rd ACMSM offering is the first time it has been held in the Northern Rivers region of New South Wales, Australia. As an indicator of the growth of the conference series the proceedings of ACMSM23 contains 200 submissions produced by 384 authors from 17 countries around the world. ACMSM has nurtured many graduate students over the years, and has stimulated discussion and action within academic and industry circles. The breadth of the scope of ACMSM ensures it attracts a healthy cross-section of contributors and attendees working in fields concerned with the mechanics of structures and materials.

The following table provides a summary of the paper topics contained in the ACMSM23 proceedings. These papers were authored by academics, researchers, manufacturers and practicing engineers. The six keynote submissions encompass a wide range of contemporary engineering fields and they were authored by leading figures in Australasia and abroad. The 194 peer-reviewed papers accepted into ACMSM23 were subjected to a rigorous peer-review process. Abstracts initially submitted to the conference were reviewed by members of the Organising Committee. Full papers arising from the accepted abstracts were then reviewed by at least two reviewers who were drawn from members of the International Scientific Committee and Organising Committee of the conference.

Volume	Broad Fields	Specific Fields
I	Keynotes	Bridging Industry and Academia; Earthquake Engineering; High-rise Buildings; Performance Enhancement of Structures; Fire Engineering; Infrastructure Improvement
	Materials	Concrete and Geopolymer Materials Synthetic and Nature-based Materials Recycled Materials
	Structures	Concrete Structures FRP-strengthened and all-FRP Structures Steel and Timber Structures Composite Structures Structural Optimisation, Risk and Reliability
II	Mechanics	Geomechanics and Geotechnical Engineering Computational Mechanics Biomechanics and Bioengineering
	Loading	Structural Dynamics and Earthquake Engineering Wind Engineering Blast and Impact Loading Thermal Loading and Fire Engineering
	Assessment and Applications	Structural Health Monitoring and Damage Identification Case Studies and Site Investigations

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