



Preface

The 2022 International Conference on Topology, Algebra and Category Theory (TACT2022) was a specialised conference dedicated to celebrating the mathematical life, 65th birthday and retirement of Professor Themba Dube at the University of South Africa (UNISA). The conference was a hybrid medium event both virtual over live streaming, and physical, in-person, hosted by the Topology Research Group (TAU), in the Department of Mathematical Sciences at UNISA. The venue for the conference was the Kloofzicht Lodge and Spa conferencing facilities situated in Kromdraai, Krugersdorp, Johannesburg. TACT2022 was held during 19 - 22 September 2022.

The programme consisted of 45 scheduled talks that included invited plenary addresses. The conference attracted 91 participants gathered together from 13 countries: Belgium, Botswana, the Czech Republic, India, Iran, Kenya, Namibia, Pakistan, Portugal, South Africa, Spain, Turkey and the United States of America. The talks covered areas of categories and ordered algebraic structures specifically Representable and Topological Categories, Commutative Algebra, Frames/Locales, Topos Theory, Sheaf Theory and on Semigroups.

The Organizing Committee consisted of the members from TAU, namely,

Prof Oghenetega Ighedo (as Chair), Prof Inderasan Naidoo, Dr Partha Pratim Ghosh and Dr Collins Agyingi. Administrative support was provided by Ms Busi Zwane, Ms Yvonne Tlhowe and Mrs Thembeke Ntuli Mpapama from the College of Science, Engineering and Technology (CSET) at UNISA.

TAU would like to acknowledge their gratitude to the Department of Mathematical Sciences at UNISA for the generous financial sponsorship of the conference. Their gratitude is also extended to the Chair of the Department of Mathematical Sciences (Prof Melusi Khumalo and Prof Amos Kubeka (acting)), the Director of the School of Science (Prof Leslie Lekala and Prof Melusi Khumalo (acting)), Prof Sarah Jane Johnston (Head of Research and Graduate Studies of CSET), Prof Bhekie Mamba (Executive Dean of CSET) and Prof Thenjiwe Meyiwa (Vice-Principal: Research, Post-graduate Studies, Innovation and Commercialisation) at UNISA for their unwavering support of TACT2022.

TAU would also like to thank the invited plenary speakers that traversed many miles to celebrate in the event in person. To Prof Jorge Picado (University of Coimbra, Portugal), Prof Maria Manuel Clementino (University of Coimbra, Portugal), Prof Javier Gutiérrez García (University of the Basque Country UPV/EHU, Spain), Prof James Madden (Louisiana State University, USA), Prof Aleš Pultr (Charles University, Czech Republic), Prof Mark Sioen (Vrije Universiteit Brussels, Belgium), Prof Dharm Baboolal (University of KwaZulu-Natal), Prof George Janelidze (University of Cape Town), Prof Anneliese Schauerte (University of Cape Town), Prof Zurab Janelidze (University of Stellenbosch, President of the South African Mathematical Society) and Prof Seithuti Moshokoa (Tshwane University of Technology, Vice-President of the South African Mathematical Society) we are truly indebted for your participation, contributions and presence in commemorating Prof Themba Dube at TACT2022. To the colleagues that contributed talks, the topology research group is also forever indebted to you for your time invested in sharing your research work in this international conference.

We thank Professor Themba Dube for all his support of TAU, collaborations, joint publications, fostering graduate attributes, mentorship,

journeys, ideas, scholarship, joys, smiles, his humility, generosity and dear friendship. We extend our best wishes to him on his retirement and wish him a very happy 65th birthday and to live long and prosper.

This Special Issue of Categories and General Algebraic Structures with Applications (CGASA) is the Second Volume dedicated to the proceedings of the conference TACT2022. It includes 9 other papers of 17 papers that have been peer-reviewed and accepted according to the usual high standards of CGASA. We thank the authors for their contributions to this special volume and the referees for timely reviewing the submitted manuscripts and their valuable suggestions and recommendations of the papers.

A tremendous special thanks goes to the Editor-in-Chief of CGASA, Prof Mehdi Ebrahimi and to Prof Mojgan Mahmoudi (Director-in-Charge at CGASA) in materialising this special volume dedicated to Professor Themba Dube.

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