Preface

This volume of proceedings follows from the online lectures series held during the LMS Autumn Algebra School 2020 and comprises extended versions of the material presented during the online lectures. The school was supported by the London Mathematical Society Covid Working Group and by ERC grant no. 637618.

The lectures were delivered by early career researchers from three London Mathematical Society Joint Research Groups in the UK, namely ARTIN, BLOC and Functor categories for groups, whose lead organisers are also the Editors of the present volume.

The *Bristol-Leicester-Oxford-City Colloquium (BLOC)* was an LMS Joint Research Group based at the University of Leicester from 1997 up until the closure of the pure mathematics group at the University of Leicester in 2021. The network focused on the representation theory of finite dimensional algebras as well as aspects of modular representation theory of finite groups. *Algebra and Representation Theory in the North (ARTIN)* is an LMS Joint Research Group in the UK founded in 2003 and dedicated to the study of non-commutative algebra, representation theory and quantum groups. *Functor Categories for Groups (FCG)* is an LMS Joint Research Group in the UK founded in 2016 and dedicated to the study of abstract groups and related aspects.

The lectures were hosted online by the International Centre for Mathematical Sciences, and recordings can be found on the ICMS website:

www.icms.org.uk/seminars/2020/lms-autumn-algebra-school-2020.

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The material written in this book has been prepared by the lecturers and underwent peer-review. The Editors are very grateful to the authors for their engagement throughout the process and the excellent quality of the work produced, and to the mentors and peer-reviewers who helped perfect the chapters.

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