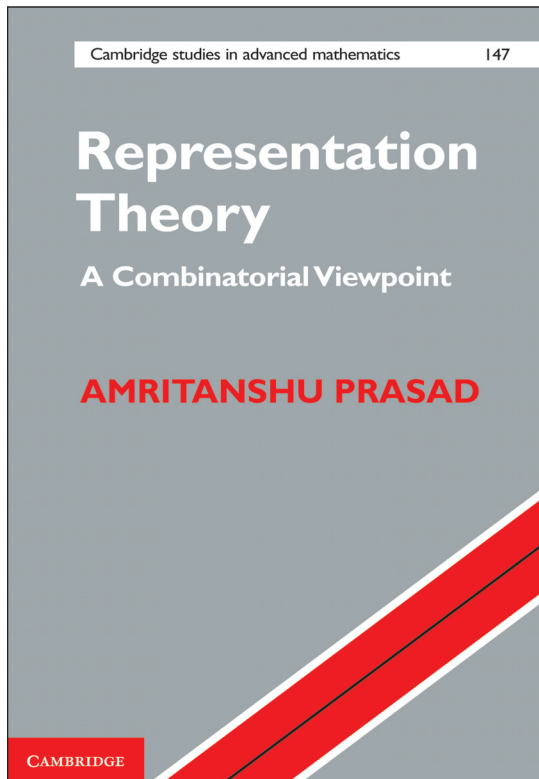Size : 250mm x 130mm

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## Cambridge studies in advanced mathematics 147

# Representation Theory

## A Combinatorial Viewpoint

### Amritanshu Prasad

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# Representation Theory
## A Combinatorial Viewpoint

### Amritanshu Prasad

This book discusses the representation theory of symmetric groups, the theory of symmetric functions and the polynomial representation theory of general linear groups. The first chapter provides a detailed account of necessary representation-theoretic background. An important highlight of this book is an innovative treatment of the Robinson–Schensted–Knuth correspondence and its dual by extending Viennot's geometric ideas. Another unique feature is an exposition of the relationship between these correspondences, the representation theory of symmetric groups and alternating groups and the theory of symmetric functions. Schur algebras are introduced very naturally as algebras of distributions on general linear groups. The treatment of Schur–Weyl duality reveals the directness and simplicity of Schur's original treatment of the subject. This book is suitable for graduate students, advanced undergraduates and non-specialists with a background in mathematics or physics.

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