

Transitions in Undergraduate Mathematics Education

Edited by Michael Grove, Tony Croft, Joe Kyle & Duncan Lawson

UNIVERSITY OF
BIRMINGHAM

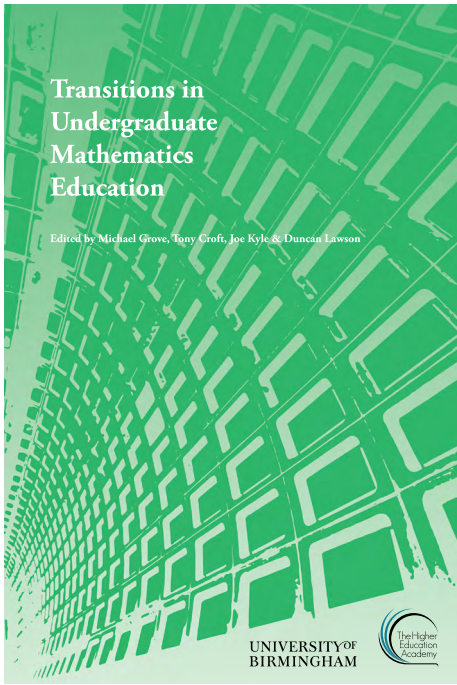


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'As lecturers, tutors and teachers, we are in a privileged position to work with young minds to support their mathematical growth. The transmission of our excitement, knowledge and understanding to our students is a complex challenge that demands considerable expertise, especially given the different mathematical backgrounds of our students, their diverse

mathematical needs and career goals. Students will inevitably face barriers to their learning of mathematics and this is where this volume is invaluable with its pragmatic and practical advice and excellent reference source.'

**Professor Dame Celia Hoyles DBE
& Professor John R. Blake**



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Written to meet the needs of university lecturers, teachers and tutors, this book forms a guide to understanding key issues, good practices and developments in learning and teaching in mathematics within higher education. Each Chapter is focused around an important transition point and written in a style that brings together published and evidence-based literature from across the higher education sector, analysing this in a scholarly manner to identify practical recommendations and 'tips' for both new and more experienced higher education practitioners alike.

**For further information visit
birmingham.ac.uk/Transitions**

The changing nature of mathematics within UK higher education – Joe Kyle

Using mathematics to motivate and inspire future generations of learners – Vivien Easson & Peter McOwan

Mathematics education and the transition into higher education – Transmaths demands better learning-teaching dialogue – Julian Williams

Mathematics Support at the transition to university – Duncan Lawson

Lectures and transition: from bottles to bonfires? – David Pritchard

Enabling students to become independent learners – Louise Walker

Group work within undergraduate mathematics – Neil Challis

Problem solving in a mathematics degree – Trevor Hawkes

Mathematical modelling and problem solving in real-world physical situations – Mike Savage & Michael Grove

Learning statistics at university – Paul Hewson

Technology-led teaching: the role of mathematical software – Chris Sangwin

Providing effective feedback – Mike Robinson

Progression within mathematics degree programmes – Tony Croft & Michael Grove

Employability for the workplace – Jeff Waldock & Stephen Hibberd

The neurodiverse mathematics student – Clare Trott

Creating an accessible learning environment: Anticipating and resolving practical barriers – Emma Cliffe

Gender and university mathematics teaching – Melissa Rodd

Developing mathematics teaching: what can we learn from the literature? – Stephanie Treffert-Thomas & Barbara Jaworski

Embedding a scholarly element into your teaching – John O'Donoghue & Olivia Fitzmaurice