David Bressoud

## A Radical Approach to Real Analysis

| Second Edition |

## READ WHAT REVIEWERS SAID ABOUT THE FIRST EDITION:

This is a remarkable and important undergraduate book. Every lecturer who deals with real analysis should have a copy.

- Bob Burn, The Mathematical Gazette

The book can be recommended as a resource for instructors, and as collateral reading for students who may wonder how and why the early pioneers developed concepts such as continuity, differentiability, integrability and uniform convergence.

-T. M. Apostol, Zernralblain für Mathemacik.

The past decade or so has witnessed the appearance of a substantial number of "bridge the gap" introductions to real analysis, which lead the students at a gentler pace through the fundamentals of real analysis according to the traditional collabor. It is well worth considering whether students in their undergraduate real analysis course might be better urred by a radical approach such as Bressond's.

-G. A. Heser, Mathematical Reviews

In the second edition of this MAA classic, exploration continues to be an essential component. More than 60 new exercises have been added, and the chapters on Infinite Summations, Differentiability and Continuity, and Convergence of Infinite Series have been reorganized to make it easier to identify the key ideas:

A Radical Approach to Real Analysis is an introduction to real analysis, rooted in and informed by the historical issues that shaped its development. It can be used as a text-book, or as a resource for the instructor who prefers to teach a traditional as a resource for the student who has been through a traditional course understand what real analysis is about and why it was created.

The book begins with Fourier's introduction of trigonometric series and the probles the created for the mathematicians of the early 19th century. It follows Cartifold the mathematicians of the early 19th century. It follows Cartifold the counterint for calculus, and considers his failures as well as his successes. It culminates with Dirichlet's proof of the validity of the Fourier series expansion and explores some of the counterintuitive results Riemann and Weierstrass were led to as a result of Dirichlet's proof.

# **Radical Approach To Real Analysis**

Tom L. Lindstrøm

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