

## **The Cambridge Handbook of Computing Education Research**

This handbook describes the extent and shape of computing education research today. Over 50 leading researchers from academia and industry (including Google and Microsoft) have contributed chapters that together define and expand the evidence base.

The foundational chapters set the field in context, articulate expertise from key disciplines, and form a practical guide for new researchers. They address what can be learned empirically, methodologically, and theoretically from each area. The topic chapters explore issues that are of current interest, why they matter, and what is already known. They include discussion of motivational context, implications for practice, and open questions that might suggest avenues of future research.

The authors provide an authoritative introduction to the field that is essential reading for policy makers, as well as both new and established researchers.

SALLY A. FINCHER is Professor of Computing Education in the School of Computing at the University of Kent, UK, where she leads the Computing Education Research Group. She is also an Association for Computing Machinery Distinguished Scientist, a UK National Teaching Fellow, a Senior Fellow of the UK Higher Education Academy, and a Fellow of the Royal Society of Arts.

ANTHONY V. ROBINS is Professor of Computer Science at the University of Otago, New Zealand. He is also Associate Journal Editor of *Computer Science Education* and has co-organized multinational research studies. He has worked for the Ministry of Education, New Zealand, on new programming assessment standards and related instructional materials for secondary schools.



# **The Cambridge Handbook of Computing Education Research**

Edited by

**Sally A. Fincher**

*University of Kent*

**Anthony V. Robins**

*University of Otago*



**CAMBRIDGE**  
UNIVERSITY PRESS

# CAMBRIDGE

## UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,  
New Delhi – 110025, India

79 Anson Road, #06-04/06, Singapore 079906

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9781108496735](http://www.cambridge.org/9781108496735)

DOI: 10.1017/9781108654555

© Cambridge University Press 2019

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2019

Printed and bound in Great Britain by Clays Ltd, Elcograf S.p.A.

*A catalogue record for this publication is available from the British Library.*

### *Library of Congress Cataloging-in-Publication Data*

Names: Fincher, Sally, 1959– editor. | Robins, Anthony (Anthony V.) editor.

Title: The Cambridge handbook of computing education research /  
edited by Sally A. Fincher, University of Kent, Anthony V. Robins,  
University of Otago.

Other titles: Handbook of computing education research

Description: New York, NY: Cambridge University Press, 2019. |

Includes bibliographical references and index.

Identifiers: LCCN 2018039947 | ISBN 9781108496735 (hardback) |

ISBN 9781108721899 (paperback)

Subjects: LCSH: Computer science – Study and teaching – Handbooks, manuals, etc.

Classification: LCC QA76.27.C355 2019 | DDC 004.071–dc23

LC record available at <https://lcn.loc.gov/2018039947>

ISBN 978-1-108-49673-5 Hardback

ISBN 978-1-108-72189-9 Paperback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.