

“This is a ground-breaking, rigorously researched volume that explores the intersection of language and translation technologies in healthcare settings, ultimately calling for more effective communication between providers and patients. Whether you are a healthcare professional, a language service provider, or a patient navigating the healthcare system, this book is an indispensable guide to breaking down barriers and promoting technological, linguistic and cultural competence in healthcare.”

– *Prof. Jorge Díaz-Cintas, University College London*

“This book is an insightful deep dive into the multitude of ways that translation tools can be used to advance health communication. This is a must-read for any individual with an interest in developing or evaluating technologies to address gaps in translation access in the healthcare setting. The authors provide foundational knowledge about the types of technologies available, how they can be applied, and approaches to evaluations. Through case studies, the readers then learn about challenges and opportunities for translation technologies to advance health globally. These wide-ranging examples collated into a single volume demonstrate the potential of these tools to transform communication across language barriers.”

– *Elaine Khoong, MD, University of California, San Francisco*

Translation Technology in Accessible Health Communication

Digital health translation is an important application of machine translation and multilingual technologies, and there is a growing need for accessibility in digital health translation design for disadvantaged communities. This book aims to address that need by highlighting state-of-the-art research on the design and evaluation of assistive translation tools, along with systems to facilitate cross-cultural and cross-lingual communications in health and medical settings. Using case studies as examples, the principles of designing assistive health communication tools are illustrated. These are (1) detectability of errors to boost user confidence by health professionals; (2) adaptability or customizability for health and medical domains; (3) inclusivity of translation modalities (written, speech, sign language) to serve people with disabilities; and (4) equality of accessibility standards for localized multilingual websites of health contents. This book will appeal to readers from natural language processing, computer science, linguistics, translation and interpreting studies, public health, media, and communication studies.

MENG JI is an Associate Professor of Translation Studies at The University of Sydney, where she specializes in empirical translation studies and multilingual communications. She received the first PhD in Translation Studies from Imperial College of Science, Technology and Medicine and has worked in London and Tokyo with competitive research fellowships from national research councils in the UK and Japan. The author and editor of more than two dozen books, Dr. Ji has published extensively on environmental and health translation, empirical multilingual translation methodologies, people-centered translation quality assessment, and inclusive translation services and technologies.

PIERRETTE BOUILLON is a professor and dean at the Faculty of Translation and Interpreting, University of Geneva, Switzerland. She is the author of numerous publications in natural language processing, particularly within speech-to-speech machine translation for medical domain and pre- and post-editing, and more recently accessibility. She currently co-leads the Swiss Research Centre Barrier-Free Communication with Zurich University of Applied Sciences, and is the lead investigator of multiple projects of translation studies from the Swiss National Science Foundation and the European Research Council.

MARK SELIGMAN is the founder and President of Spoken Translation, Inc. and the Chief Linguist of Speech Morphing, Inc. Since the 1990s, he has led the design, testing, and implementation of multiple speech translation systems for English, Spanish, Japanese, French, and German, with research associations in the USA, Japan, and Europe, and has contributed to artificial intelligence research and development since the 1980s. He received his PhD in Computational Linguistics from University of California–Berkeley in 1991.

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Volumes in the SNLP series provide comprehensive surveys of current research topics and applications in the field of natural language processing (NLP) that shed light on language technology, language cognition, language and society, and linguistics. The increased availability of language corpora and digital media, as well as advances in computer technology and data sciences, has led to important new findings in the field. Widespread applications include voice-activated interfaces, translation, search engine optimization, and affective computing. NLP also has applications in areas such as knowledge engineering, language learning, digital humanities, corpus linguistics, and textual analysis. These volumes will be of interest to researchers and graduate students working in NLP and other fields related to the processing of language and knowledge.

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Translation Technology in Accessible Health Communication

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CAMBRIDGE
UNIVERSITY PRESS

Shaftesbury Road, Cambridge CB2 8EA, 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,
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103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment,
a department of the University of Cambridge.

We share the University's mission to contribute to society through the pursuit of
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www.cambridge.org

Information on this title: www.cambridge.org/9781108837378

DOI: [10.1017/9781108938976](https://doi.org/10.1017/9781108938976)

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An online version of this work is published at doi.org/10.1017/9781108938976
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When citing this work, please include a reference to the DOI [10.1017/9781108938976](https://doi.org/10.1017/9781108938976)

First published 2023

Printed in the United Kingdom by TJ Books Limited, Padstow Cornwall

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

Library of Congress Cataloging-in-Publication Data

Names: Ji, Meng (Professor of translation studies), editor. | Bouillon, Pierrette, editor. | Seligman, Mark, editor.

Title: Translation technology in accessible health communication / Meng Ji, Pierrette Bouillon, Mark
Seligman ; with contributions from Bastien David, Magali Norré, Irene Strasly, Hervé Spechbach,
Johanna Gerlach, Lúcia Morado Vásquez, Silvia Rodríguez Vásquez.

Other titles: Studies in natural language processing.

Description: Cambridge : New York, NY : Cambridge University Press, 2023. | Series: Studies in natural
language processing | Includes bibliographical references and index.

Identifiers: LCCN 2023029455 | ISBN 9781108837378 (hardback) | ISBN 9781108938976 (ebook)

Subjects: MESH: Health Communication – methods | Translating | Informatics – methods | Software |
Communication Barriers

Classification: LCC R118 | NLM WA 590 | DDC 610.1/4–dc23/eng/20230720

LC record available at <https://lccn.loc.gov/2023029455>

ISBN 978-1-108-83737-8 Hardback

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