

Persuasive Communication for Science and Technology Leaders

Writing and Speaking with Confidence

STEPHEN WILBERS



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**PERSUASIVE
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A Note from the Series Editor

Welcome to the Wiley–IEEE Press Series on Technology Management, Innovation, and Leadership!

The IEEE Press imprint of John Wiley & Sons is well known for its books on technical and engineering topics. This new series extends the reach of the imprint, from engineering and scientific developments to innovation and business models, policy and regulation, and ultimately to societal impact. For those who are seeking to make a positive difference for themselves, their organization, and the world, technology management, innovation, and leadership are essential skills to home.

The world today is increasingly technological in many ways. Yet, while scientific and technical breakthroughs remain important, it's connecting the dots from invention to innovation to the betterment of humanity and our ecosphere that has become increasingly critical. Whether it's climate change or water management or space exploration or global healthcare, a technological breakthrough is just the first step. Further requirements can include prototyping and validation, system or ecosystem integration, intellectual property protection, supply/value chain set-up, manufacturing capacity, regulatory and certification compliance, market studies, distribution channels, cost estimation and revenue projection, environmental sustainability assessment, and more. The time, effort, and funding required for realizing real-world impact dwarf what was expended on the invention. There are no generic answers to the big-picture questions either, the considerations vary by industry sector, technology area, geography, and other factors.

Volumes in the series will address related topics both in general – e.g. frameworks that can be applied across many industry sectors – and in the context of one or more application domains. Examples of the latter include transportation and energy, smart cities and infrastructure, and biomedicine and healthcare. The series scope also covers the role of government and policy, particularly in an international technological context.

With 30 years of corporate experience behind me and about five years now in the role of leading a Management of Technology program at a university, I see a broad-based need for this series that extends across industry, academia, government, and nongovernmental organization. We expect to produce titles that are relevant for researchers, practitioners, educators, and others.

I am honored to be leading this important and timely publication venture.

Tariq Samad

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PERSUASIVE COMMUNICATION FOR SCIENCE AND TECHNOLOGY LEADERS

WRITING AND SPEAKING WITH CONFIDENCE

Stephen Wilbers

IEEE Press Series on Technology Management, Innovation, and Leadership




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To all great writers, readers, scientists, technicians, and leaders,
young and old,

with thanks for making this world a better place.

To Debbie, for her generosity, thoughtfulness, love, and support.

And to my grandchildren, Matilda & Lachlan,

with this poem from my chapbook, *This Northern Nonsense*:

Why Write?

Why this impulse
to capture truth and beauty
in words?
Above the still water, across
the channel that cuts
between these islands,
the rock rises calmly, giving
way to green moss and mottled
shade as it climbs the hillside
that runs beneath the pine forest.
Maybe we write to create a record,
to help us not forget.
If I weren't sitting here now, at this
moment, notebook before me,
pen in hand, no one would know
how that merganser swam
down this channel, bobbing
her head, a wary eye on the
world, and moments later,
how she returned.

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ABOUT THE AUTHOR



Stephen Wilbers is an award-winning author and former columnist for the *Minneapolis Star Tribune*. He has offered writing seminars, workshops, and classes to more than 10,000 scientific, technical, business, legal, academic, and creative writers.

He teaches writing and oral presentation skills in the University of Minnesota's Technological Leadership Institute. He has also taught writing in the Carlson School of Management's M.B.A. Program, the Program in American Studies, and the Program in Creative and Professional Writing. In 1995, he won an Outstanding Faculty Award in Hamline University's Graduate Public Administration Program.

Dr. Wilbers earned his B.A. at Vanderbilt University and his M.A. and Ph.D. at the University of Iowa. He spent his junior year abroad in Aix-en-Provence, and he was a Visiting Fulbright Fellow at the University of Essex in Colchester, England. He served as board chair of the Loft Literary Center in Minneapolis, where he now lives. He and his wife Debbie have two children and two grandchildren.

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For answers to common writing-related questions such as “Does the period go before or after the closing quotation marks,” preface your online search with “wilbers,” as in “wilbers punctuation.”

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HOW THIS BOOK DIFFERS FROM OTHER COMMUNICATION GUIDES

This is a beautifully and engagingly written book. Dr. Wilbers' love of language and the craft of writing fully comes out, and I am optimistic that his passion will rub off on many of the readers of the volume. Too many guides to writing are dry and "manual"-like; this is the opposite – bridging the technical/literary divide, suffused with humor, connecting language use with desired impact on the audience.

– **TARIQ SAMAD**, IEEE Fellow and Honeywell/W.R. Sweatt Chair at the University of Minnesota's Technological Leadership Institute

PREVIOUSLY PUBLISHED MATERIAL

Some columns published between 1991 and 2017 by the *Minneapolis Star Tribune* and other newspapers and magazines have been incorporated into this book, as well as part of an article published by *The College Board Review* in its winter 1989–90 issue.

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Writing for Business (collected columns)

Writing by Wilbers (collected columns)

Keys to Great Writing: Mastering the Elements of Composition and Revision (writing instruction)

Mastering the Craft of Writing: How To Write with Clarity, Emphasis, & Style (writing instruction)

This Northern Nonsense: Ernest Oberholtzer and Mallard Island (a chapbook of poems)

A Boundary Waters History: Canoeing Across Time (history)

Canoeing the Boundary Waters Wilderness: A Sawbill Log (memoir)