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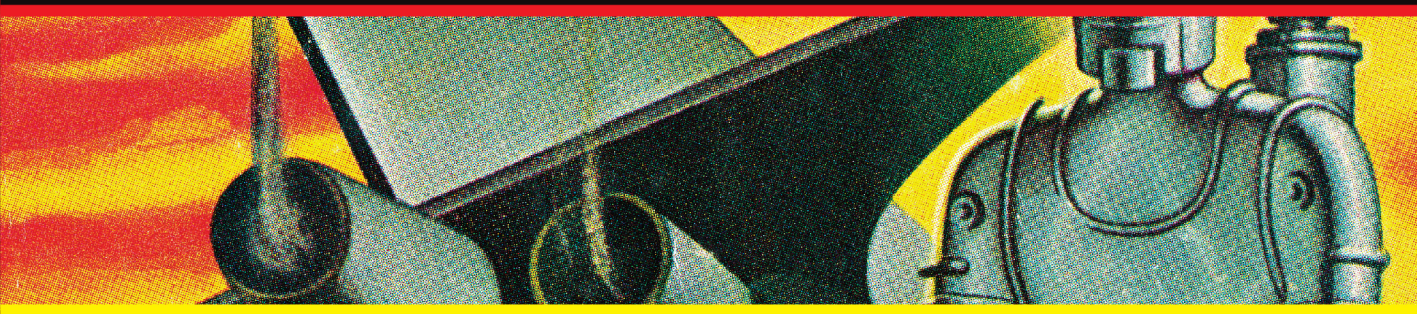

MARC GREGOIRE

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Sixth Edition

Marc Gregoire

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Dedicated to my amazing parents and brother,
whose continuous support and patience help me in
tackling such a big project as writing this book.

ABOUT THE AUTHOR

MARC GREGOIRE is a software architect from Belgium. He graduated from the University of Leuven, Belgium, with a degree in "Burgerlijk ingenieur in de computer wetenschappen" (equivalent to a master of science in engineering in computer science). The year after, he received an advanced master's degree in artificial intelligence, *cum laude*, at the same university. After his studies, Marc started working for a software consultancy company called Ordina Belgium. As a consultant, he worked for Siemens and Nokia Siemens Networks on critical 2G and 3G software running on Solaris for telecom operators. This required working in international teams stretching from South America and the United States to Europe, the Middle East, Africa, and Asia. Now, Marc is a software project manager and software architect at Nikon Metrology (`industry.nikon.com`), a division of Nikon and a leading provider of precision optical instruments, X-ray machines, and metrology solutions for X-ray, CT, and 3-D geometric inspection.

His main expertise is C++. He has experience with developing C++ programs running 24/7 on Windows and Linux platforms: for example, KNX/EIB home automation software. In addition to C++, Marc also likes C#.

Since April 2007, he has received the annual Microsoft MVP (Most Valuable Professional) award for his Visual C++ expertise.

Marc is the founder of the Belgian C++ Users Group (`becpp.org`), co-author of *C++ Standard Library Quick Reference* 1st and 2nd editions (Apress 2016 and 2019), a technical editor for numerous books for several publishers, and a regular speaker at the CppCon C++ conference (`cppcon.org`). He maintains a blog at `www.nuonsoft.com/blog` and is passionate about traveling and gastronomic restaurants.

ABOUT THE TECHNICAL EDITORS

BRADLEY JONES has programmed in a variety of languages and tools ranging from C to Unity on platforms ranging from Windows to mobile and including the web as well as a little bit of virtual reality and embedded devices just for fun. In addition to programming, he has authored books on C, C++, C#, Windows, the web, and many more technical topics and a few nontechnical topics. Bradley is the owner of Lots of Software, LLC, and has been recognized in the industry as a community influencer as well as has been recognized as a Microsoft MVP, a CODiE Judge, an international technology speaker, a bestselling technical author, and more.

ARTHUR O'DWYER is a professional C++ trainer, software engineer, author, and WG21 committee member. He authored *Mastering the C++17 STL* (Packt Publishing, 2017), founded CppCon's "Back to Basics" track (2019), implemented libc++'s <memory_resource> header (2022), and is responsible for the simplified "implicit move" semantics in C++20 and C++23. He and his wife live in New York.

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Finally, I thank you, the reader, for supporting me over all these years and across numerous editions with this approach to professional C++ software development.

—Marc Gregoire

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