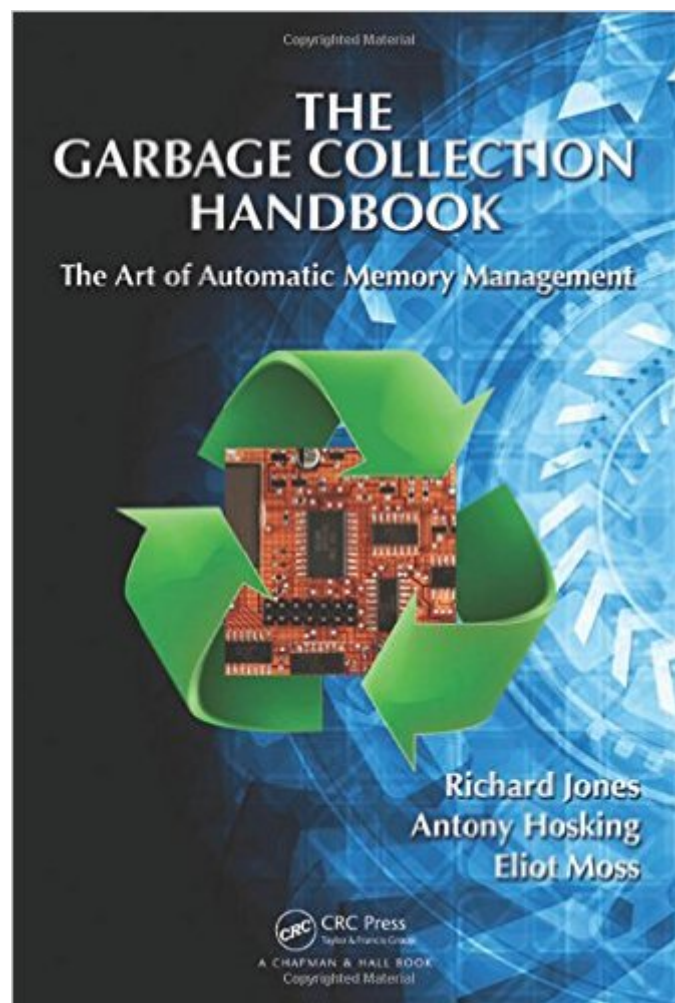# The Garbage Collection Handbook: The Art Of Automatic Memory Management (Chapman & Hall/CRC Applied Algorithms And Data Structures Series)

Synopsis

Published in 1996, Richard Jonesâ ™s Garbage Collection was a milestone in the area of automatic memory management. The field has grown considerably since then, sparking a need for an updated look at the latest state-of-the-art developments. The Garbage Collection Handbook: The Art of Automatic Memory Management brings together a wealth of knowledge gathered by automatic memory management researchers and developers over the past fifty years. The authors compare the most important approaches and state-of-the-art techniques in a single, accessible framework. The book addresses new challenges to garbage collection made by recent advances in hardware and software. It explores the consequences of these changes for designers and implementers of high performance garbage collectors. Along with simple and traditional algorithms, the book covers parallel, incremental, concurrent, and real-time garbage collection. Algorithms and concepts are often described with pseudocode and illustrations. The nearly universal adoption of garbage collection by modern programming languages makes a thorough understanding of this topic essential for any programmer. This authoritative handbook gives expert insight on how different collectors work as well as the various issues currently facing garbage collectors. Armed with this knowledge, programmers can confidently select and configure the many choices of garbage collectors. Web ResourceThe bookâ ™s online bibliographic database at www.gchandbook.org includes over 2,500 garbage collection-related publications. Continually updated, it contains abstracts for some entries and URLs or DOIs for most of the electronically available ones. The database can be searched online or downloaded as BibTeX, PostScript, or PDF. E-bookThis edition enhances the print version with copious clickable links to algorithms, figures, original papers and definitions of technical terms. In addition, each index entry links back to where it was mentioned in the text, and each entry in the bibliography includes links back to where it was cited.

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Customer Reviews

"The Garbage Collection Handbook is the most up to date, detailed, and exhaustive collation and description of the current state of the art of the Garbage Collection and Automatic Memory Management available today. It is an imperative reference book for anyone working in the field, and I would consider it the textbook of reference covering 'GC 101' thru 'GC 530' course levels, if such courses were given at universities worldwide. As CTO of Azul Systems and co-creator of multiple modern concurrent collectors, Richard Jones' previous 'Garbage Collection' (1996) book was indispensable to my work over the years. The Garbage Collection Handbook has immediately taken its place. Each of our GC engineers has a copy on their desk.Gil Tene, Chief Technical Officer and co-founder of Azul Systems

This probably is the best book on GC that is both systematical and practical. Really helpful for understanding all GC algorithms.

This is an excellent book and the on-line resources are quite good. The content covered is well-described.

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