

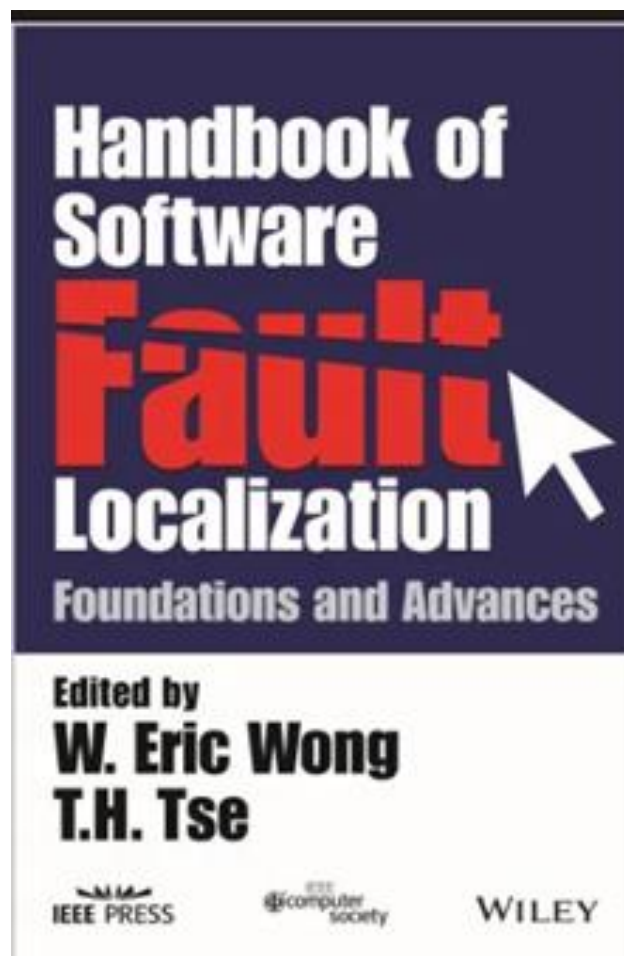
# Handbook of Software Fault Localization: Foundations and Advances

W. Eric Wong  
Department of Computer Science  
University of Texas at Dallas

T.H. Tse  
Department of Computer Science  
University of Hong Kong

The *Handbook of Software Fault Localization: Foundations and Advances* edited by Dr. W. Eric Wong, Professor and Director of the Software Engineering Program of the Computer Science Department at the University of Texas at Dallas, and Dr. T.H. Tse, an Honorary Professor in Computer Science with The University of Hong Kong, has been jointly published by Wiley and the IEEE Computer Society Press.

In addition to a paper copy, an online version is also available via the IEEE Xplore digital library.



The book gives a [comprehensive analysis of fault localization techniques and strategies](#). It covers up-to-date techniques, tools, and essential issues in software fault localization. Aside from exploring critical aspects of software fault localization, it also examines multiple bugs, successful and failed test cases, coincidental correctness, code that has been missing, multiple fault localization techniques, ties within fault localization rankings, concurrency bugs, spreadsheet fault localization, and theoretical studies of fault localization.

The Handbook includes:

- A thorough introduction to the concepts of software testing and debugging, their importance, typical challenges, and the consequences of poor efforts.
- Comprehensive explorations of traditional fault localization techniques, including program logging, assertions, and breakpoints.
- Practical discussions of slicing-based, program spectrum-based, and statistics-based techniques.
- In-depth examinations of machine learning-, data mining-, and model-based techniques for software fault localization.

The Handbook has 13 chapters and more than 600 pages. Each chapter can be downloaded from the [IEEE Xplore](#) digital library.

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