Software Engineering: An Engineering Approach
James F. Peters, Witold Pedrycz


DESCRIPTION

Peters and Pedrycz have written the first comprehensive and complete text on a quantitative approach to Software Engineering. This book provides the reader with well-defined and carefully described software practices based on industry standards. It presents practical approaches to specifying, designing and testing software as well as the foundations of Software Engineering. Frameworks, methods and technologies in aid of the activities typically found in software projects, are thoroughly presented. This book includes a complete case study representing all of the major phases in software development.

Emphasizing both the design and analysis of the technology, Peters and Pedrycz have created a highly balanced introduction to Software Engineering. This text provides students with a holistic look at software design by encouraging them to view the process as an interplay between hardware and software. The reader will also find the latest information in the field, frequent references to related web sites, a glossary of technical terms and acronyms, and supplementary material at the authors’ web site.

This text is suitable for a one semester, junior/senior undergraduate course in Software Engineering.

ABOUT THE AUTHOR

James F. Peters is an Assistant Professor in the Department of Electrical and Computer Engineering at the University of Manitoba (Canada). He has published numerous papers on formal methods in the design of real-time systems, application of fuzzy sets, rough sets, Petri nets and software engineering. He serves as Associate Editor of Control Engineering Practice and is an IEEE
distinguished lecturer on formal methods in system design. Witold Pedrycz is a Professor and Associate Head in the Department of Electrical and Computer Engineering at the University of Alberta (Canada). He has published numerous papers and is an author of a research monograph on fuzzy control and fuzzy systems, one on fuzzy sets engineering, and a co-author of a monograph on fuzzy relational equations. He serves as Associate Editor for the Transactions on Fuzzy Systems, Transactions on Neural Networks, and is a member of the editorial board.

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FEATURES

• Offers detailed coverage of software measures. Exposes students to quantitative methods of identifying important features of software products and processes.

• Complete Case Study. Through an air traffic control study, students can trace the application of methods and practices in each chapter.

• Problems. A broad range of problems and references follow each chapter.

• Glossary of technical terms and acronyms facilitate review of basic ideas.

• Example code given in C++ and Java.

• References to related web pages make it easier for students to expand horizons.

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