



# Empirical Research in Software Engineering: Concepts, Analysis, and Applications

By Ruchika Malhotra

Download now

Read Online 

## Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra

Empirical research has now become an essential component of software engineering yet software practitioners and researchers often lack an understanding of how the empirical procedures and practices are applied in the field. **Empirical Research in Software Engineering: Concepts, Analysis, and Applications** shows how to implement empirical research processes, procedures, and practices in software engineering.

Written by a leading researcher in empirical software engineering, the book describes the necessary steps to perform replicated and empirical research. It explains how to plan and design experiments, conduct systematic reviews and case studies, and analyze the results produced by the empirical studies.

The book balances empirical research concepts with exercises, examples, and real-life case studies, making it suitable for a course on empirical software engineering. The author discusses the process of developing predictive models, such as defect prediction and change prediction, on data collected from source code repositories. She also covers the application of machine learning techniques in empirical software engineering, includes guidelines for publishing and reporting results, and presents popular software tools for carrying out empirical studies.

 [Download Empirical Research in Software Engineering: Concep ...pdf](#)

 [Read Online Empirical Research in Software Engineering: Conc ...pdf](#)

# **Empirical Research in Software Engineering: Concepts, Analysis, and Applications**

*By Ruchika Malhotra*

**Empirical Research in Software Engineering: Concepts, Analysis, and Applications** By Ruchika Malhotra

Empirical research has now become an essential component of software engineering yet software practitioners and researchers often lack an understanding of how the empirical procedures and practices are applied in the field. **Empirical Research in Software Engineering: Concepts, Analysis, and Applications** shows how to implement empirical research processes, procedures, and practices in software engineering.

Written by a leading researcher in empirical software engineering, the book describes the necessary steps to perform replicated and empirical research. It explains how to plan and design experiments, conduct systematic reviews and case studies, and analyze the results produced by the empirical studies.

The book balances empirical research concepts with exercises, examples, and real-life case studies, making it suitable for a course on empirical software engineering. The author discusses the process of developing predictive models, such as defect prediction and change prediction, on data collected from source code repositories. She also covers the application of machine learning techniques in empirical software engineering, includes guidelines for publishing and reporting results, and presents popular software tools for carrying out empirical studies.

**Empirical Research in Software Engineering: Concepts, Analysis, and Applications** By Ruchika Malhotra **Bibliography**

- Sales Rank: #2818916 in eBooks
- Published on: 2016-03-09
- Released on: 2016-03-09
- Format: Kindle eBook



[Download Empirical Research in Software Engineering: Concepts, Analysis, and Applications](#)

 [Read Online Empirical Research in Software Engineering: Conc ...pdf](#)

## Download and Read Free Online Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra

---

### Editorial Review

#### Review

"In this book, Dr. Malhotra uses her breadth of software engineering experience and expertise to give the reader coverage of many aspects of empirical software engineering. She covers the essential techniques and concepts needed for a researcher to get started on empirical software engineering research, including metrics, experimental design, analysis and statistical techniques, threats to the validity of any research findings, and methods and tools for empirical software engineering research. ... The book provides the reader with an introduction and overview of the field and is also backed by references to the literature, allowing the interested reader to follow up on the methods, tools, and concepts described."

?From the Foreword by Mark Harman, University College London

#### About the Author

**Ruchika Malhotra** is an assistant professor in the Department of Software Engineering at Delhi Technological University (formerly Delhi College of Engineering). She was awarded the prestigious UGC Raman Fellowship for pursuing post-doctoral research in the Department of Computer and Information Science at Indiana University–Purdue University. She received her master's and doctorate degrees in software engineering from the University School of Information Technology of Guru Gobind Singh Indraprastha University. She received the IBM Best Faculty Award in 2013 and has published more than 100 research papers in international journals and conferences. Her research interests include software testing, improving software quality, statistical and adaptive prediction models, software metrics, neural nets modeling, and the definition and validation of software metrics.

### Users Review

#### From reader reviews:

##### **Anthony Chan:**

Why don't make it to become your habit? Right now, try to prepare your time to do the important action, like looking for your favorite e-book and reading a publication. Beside you can solve your long lasting problem; you can add your knowledge by the guide entitled Empirical Research in Software Engineering: Concepts, Analysis, and Applications. Try to make the book Empirical Research in Software Engineering: Concepts, Analysis, and Applications as your pal. It means that it can to become your friend when you truly feel alone and beside that course make you smarter than in the past. Yeah, it is very fortuned to suit your needs. The book makes you far more confidence because you can know every little thing by the book. So , we need to make new experience and also knowledge with this book.

##### **Yolanda Osuna:**

Book is usually written, printed, or highlighted for everything. You can know everything you want by a e-

book. Book has a different type. As we know that book is important issue to bring us around the world. Beside that you can your reading proficiency was fluently. A publication Empirical Research in Software Engineering: Concepts, Analysis, and Applications will make you to be smarter. You can feel a lot more confidence if you can know about everything. But some of you think this open or reading any book make you bored. It isn't make you fun. Why they might be thought like that? Have you seeking best book or suitable book with you?

**Brenda Fairfax:**

Information is provisions for those to get better life, information nowadays can get by anyone with everywhere. The information can be a knowledge or any news even an issue. What people must be consider while those information which is inside the former life are challenging be find than now's taking seriously which one is appropriate to believe or which one the actual resource are convinced. If you get the unstable resource then you get it as your main information there will be huge disadvantage for you. All those possibilities will not happen inside you if you take Empirical Research in Software Engineering: Concepts, Analysis, and Applications as your daily resource information.

**Ryan Fox:**

Don't be worry in case you are afraid that this book can filled the space in your house, you might have it in e-book approach, more simple and reachable. This kind of Empirical Research in Software Engineering: Concepts, Analysis, and Applications can give you a lot of pals because by you taking a look at this one book you have factor that they don't and make you actually more like an interesting person. This specific book can be one of a step for you to get success. This guide offer you information that might be your friend doesn't understand, by knowing more than other make you to be great individuals. So , why hesitate? Let us have Empirical Research in Software Engineering: Concepts, Analysis, and Applications.

**Download and Read Online Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra #X7L1RMYN5IS**

# **Read Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra for online ebook**

Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra  
Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra books to read online.

## **Online Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra ebook PDF download**

**Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra Doc**

**Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra MobiPocket**

**Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra EPub**

**X7L1RMYN5IS: Empirical Research in Software Engineering: Concepts, Analysis, and Applications By Ruchika Malhotra**