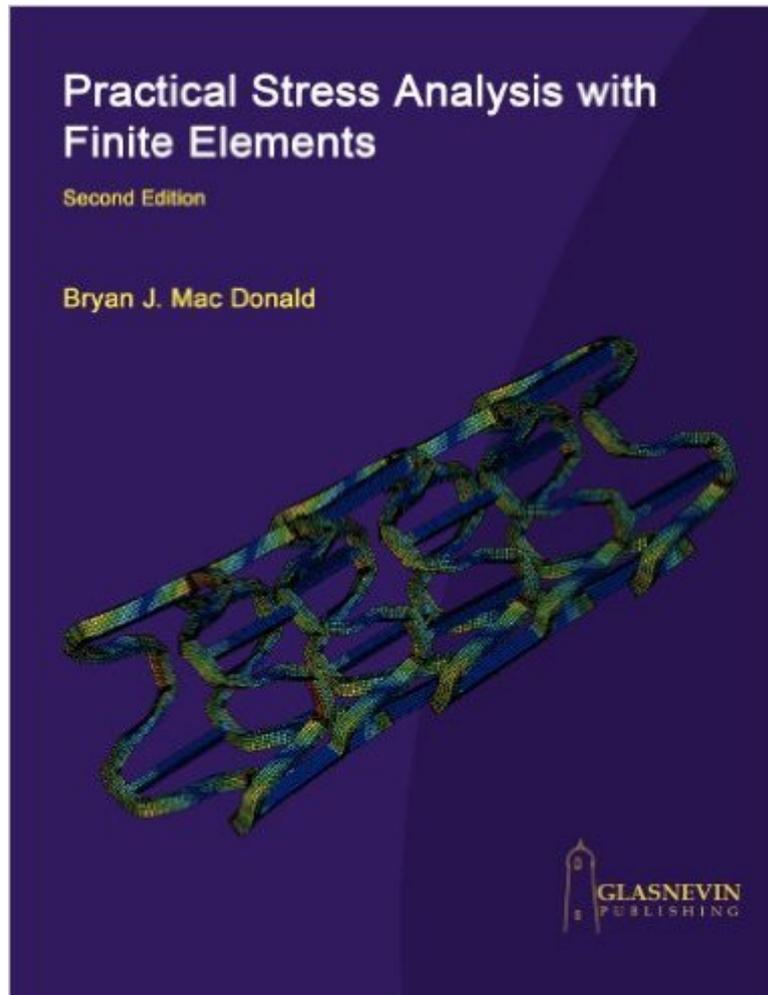


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# Practical Stress Analysis With Finite Elements (2nd Edition)



## Synopsis

Are you tired of picking up a book that claims to be on "practical" finite element analysis only to find that it is full of the same old theory rehashed and contains no advice to help you plan your analysis? If so then this book is for you! The emphasis of this book is on doing FEA, not writing a FE code. A method is provided to help you plan your analysis and a chapter is devoted to each choice you have to make when building your model giving you clear and specific advice. Finally nine case studies are provided which illustrate the points made in the main text and take you slowly through your first finite element analyses. The book is written in such a way that it is not specific to any particular FE software so it doesn't matter which FE software you use, this book can help you! The 2nd Edition of this very popular finite element analysis guide: 1)Emphasises practical finite element analysis with commercially available finite element software packages 2)Is written in a generic way so it is not specific to any particular software but clearly shows the methodology required for successful FEA 3)Is focused entirely on structural stress analysis 4)Offers specific advice on which element types to use, which material model to pick, which type of analysis to use and which type of results to look for 5)Provides specific, no nonsense advice on how to fix problems in the analysis 6)Contains over 300 illustrations 7)Provides nine detailed case studies which specifically show you how to perform various types of analysis 8)Does not weigh you down with unnecessary theory, but provides you with the minimum theory needed to understand the methods 9)Is an invaluable guide and reference for engineering students and practising engineers

## Book Information

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## Customer Reviews

This is an excellent introductory text and reference manual for any engineer that performs structural analyses. The fundamentals of finite elements are covered without excessive maths and all the concepts are explained very clearly with reference to real world examples (something that is very lacking in other similar books). If you are looking for a guide on how to perform FEA, how to set up well defined problems, how to choose the correct elements, how to choose the correct solver etc. then this book is for you! This new edition is a big improvement on the previous edition: the presentation is a lot clearer, the print quality is better and it has been expanded with more examples and also an appendix with extra information on matrices etc. As a design engineer I find myself referring to this book quite a lot (I have owned the first edition for a few years now) and I consult it before I tackle a new problem. The final section with the case studies sums up all the chapters with real world (i.e. practical) examples. Highly recommended!

This book is very informative and helpful in understanding FEA. It is good to understand FEA theory (code and mathematics), and there are many books written on that subject, but this book will help you understand in a very practical sense what is going on in your analysis.

This is probably the best introductory book on FEA that I have come across. I really like the logical presentation of the chapters which come in the order in which you have to make the various decisions when doing a stress analysis FEA. The writing style is clear with a no-nonsense approach with really good use of real life examples to illustrate the point being made. The explanations are all clear and I haven't found any mistakes yet. Pretty much everything you need is in this book as there is a chapter that reviews the main concepts of stress analysis/mechanics of solids and information in the appendix on the maths required. It is one-stop-shop for those starting to learn FEA. I imagine that this book will be useful to university students and their teachers but also to those working in the field who need to upskill or a handy reference.

This book literally saved my life! I had to learn FEA quickly for my masters thesis and this book really helped me to do it. I would have had a much harder time building my FE models if I had not read this book first. I really recommend it to anyone trying to learn finite element analysis. I didn't notice the typos that some other reviewers have mentioned but mine does say it was "reprinted with minor corrections in July 2013" so maybe these have been fixed by the publisher?

Dear colleague, The idea of my post, is not to show off about my profile... I am a mechanical engineer with experience on stress analysis and a Master degree on computational thermal science and thousand of hours in CFD. I have also worked as a stress analyst engineer and at this moment I work as specialist turbine engineer at TurboCare, having said that, I want to share my impression about this book with you. This book, besides having an excellent, clear and cleaver approach, keep important numerical and physical concepts. This is very important when engineers, perform or review FEA analysis. I highly recommend this book, no matter your level or your aspiration are, I think this a mandatory book to any stress engineer. For those like me, who require and feel the necessity to understand what is happening under the hood, this book will show and demonstrate all the mathematical aspects of the formulation.... Do not hesitate to buy this book, you will not regret about your inversion...

This book is highly recommended for amateur CAE modelers. And at the same time it is not recommended for college students who had not gone through basic FEA courses or either well versed CAE pundits. That said for those who know the basic FEA principles and want to spread their wings doing some CAE work using Abaqus, Nastran or some other solver its very informative!

After many years of owning the first edition of this book I recently took the plunge and bought the second edition. The second edition still has the same fantastic content but it is presented much better and the typo's have been sorted out. This really is the best book available on finite element analysis. It is the one I turn to whenever I have a problem and it is easy to find the relevant information and jog the old memory! Some of the other reviewers have mentioned errors and typo's - some of these are just plain malicious as these errors are not in the book. I will upload some customer images to prove my point. Anyway, don't listen to the negative talk downers - if you are new to FEA and you need to learn it with the minimum amount of fuss then this is the book for you.

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