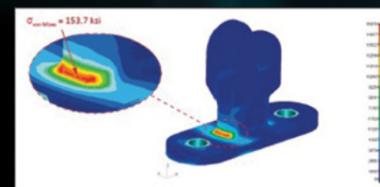
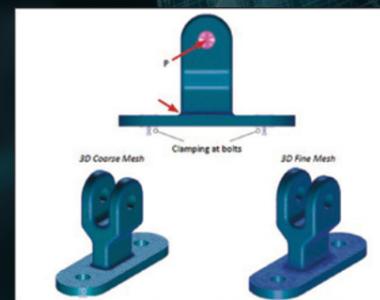
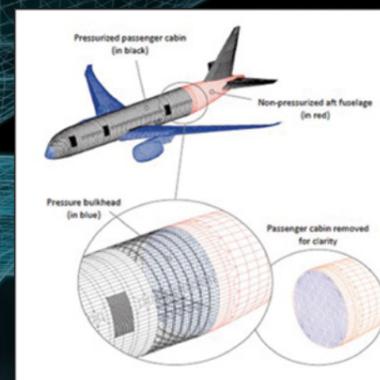
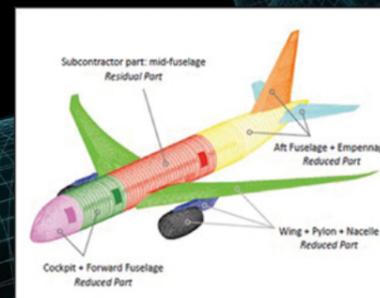




New FEA textbook for mechanical engineers provides a breath of fresh air

Dominique Madier's superb Aerospace engineering experience shines through with practical examples and no-nonsense teachings

By James Pura, Product Marketing Manager at MSC Software



In my experience (and I don't think I'm alone here), students entering university choose engineering as a topic of study NOT because it is an easy topic to learn, but because they feel a calling to work on the coolest and most technically sophisticated machines we've ever seen in the history of humanity.

Whether it be an airplane, helicopter, rocket ship, satellite, Mars rover, space station, or something we've never even seen before, Aerospace Engineers have a vast array of careers and companies to choose from these days, and that's the reason students around the world push through the pain of learning during their tenure at university. The carrot at the end of the string, if you will.

Getting to that glorious point of graduation and getting hired though is fraught with anger, frustration and confusion as students learn the theory and fundamentals of how to design, analyze, and manufacture these sophisticated machines. Engineers around the world have war stories from their university classes (as do I) that were unbelievably confusing and frustrating, without any practical, down-to-Earth applications. "Just give me a practical example of how this is used in industry!" students scream, in many languages, in many engineering classes, as they read page after page of theory and proofs in their textbooks, without having real-world examples of how these are used after graduation.

Fortunately, the world of learning engineering fundamentals just got a little bit easier. Enter: *Practical Finite Element Analysis for Mechanical Engineers*, by Dominique Madier. Students around the world can now take a deep breath of solace and calm knowing that there is a new textbook that gives them exactly what they want – the best practical methods and guidelines for the development and validation of finite element models, the history on how they were developed, and the theory behind why they're the best. And to top it all off, it was written by an Aerospace Subject Matter Expert (SME) that has seen these topics applied to real Aerospace hardware.

In the new textbook, before Dominique even begins to teach the first lesson, readers are faced with a classic, timeless quote by Leonardo de Vinci:

"Simplicity is the ultimate sophistication."

This sets the tone for the rest of the textbook, and these underpinnings can be felt in every chapter. From basics like Linear Statics and Normal Modes, to more advanced topics like Contact or Nonlinear Buckling Analysis, Dominique walks the audience through the topics with mastery and real-world, practical knowledge, all while sprinkling in images and diagrams of real-world industry examples. As I read through the book, I lost count of the number of pictures of airplanes and airplane structural parts. You'll have to do more than just count on your fingers and toes though (which is more than can be said about hardly any other engineering textbook).

Therefore, it is with great pride that we, Hexagon & MSC Software, endorse this textbook. Let it be what fuels the future of the next generation of engineering greats that are yet to come – let them use this knowledge to re-define what Aerospace Engineers can create...only time will tell. I personally cannot wait to see what they come up with.

Learn more about *Practical Finite Element Analysis for Mechanical Engineers* by Dominique Madier: www.fea-academy.com

