



A new future for structural analysis optimization?

Speaker: Tony Abbey FRAeS

Date: Monday, 5 March 2018 **Venue:** Level 8 Seminar Rooms
Registration: 6.00 pm to 6.45 pm T-Lab Building,
(Refreshments served) National University of Singapore,
Talk: 7.00 pm to 8.00 pm 5A Engineering Drive 1
Singapore 117411
[\(Click here for map and directions.\)](#)

This next evening technical talk is jointly organised by the Institution of Mechanical Engineers (IMEchE) Singapore Branch, National University of Singapore (NUS), The Institution of Engineers (IES), and the Joint Branch of RINA & IMarEST, Singapore.

Click here to register for the talk.

Registration deadline: 27 February 2018

Abstract: Structural analysis optimization is going through a renaissance at present. After many years of languishing as a specialist analyst tool, structural optimization is now back in the mainstream. The main driver has been the development of rapid prototyping and subsequently additive manufacturing processes, coupled with the maturation of topology optimization. Prior to additive manufacturing, the structural configurations offered up by topology optimization were considered way too impractical for mainstream manufacturing. Many new topology optimization products are appearing in the marketplace now. However, the focus is now much more on the practicality of the additive manufacturing process, and how simulation can be realistically extended to cover this. As products start to compete, the hype is increasing. Every branch of engineering is being encouraged to adopt new organic and radical designs! New terms such as generative design are appearing, and even the formal definitions of topology optimization are starting to blur. Do analysts and designers really understand what the tools can offer? In his talk, Tony Abbey describes the background to topology optimization, dispels some of the myths, and attempts to predict how the technology will evolve.

About the Speaker: Tony Abbey FRAeS is Professional Structural Analyst with over forty years' experience using Finite Element Analysis (FEA). He spent twenty years in industry with BAE, Rolls Royce, Boeing and others. For ten years he ran support and training groups for MSC.Software and NEi. Since 2007 with the consultancy FETraining he has provided over 200 training course in FEA. Tony presents papers at NAFEMS and other conferences on a regular basis and has been involved with NAFEMS since its formation. He has written a series of very popular articles on FEA for Digital Engineering magazine.

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