



An Idiot's Guide to Modelling and Assessment of Reinforced Concrete Structures

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"Any man can make mistakes, but only an idiot persists in his error." - Cicero

A slow but undeniable embrace of computer-based procedures for design and analysis of concrete structures is well underway. This change has been driven by external factors such as popular culture, modern office practices, and advancements in computer technology, and by internal factors such as the move from prescriptive design code specifications to more holistic performance-based design requirements. As a result, there has been a proliferation of analysis and assessment software, and a tendency amongst engineers to use them unquestioningly. Such software can be a valuable tool, enabling assessments that would be difficult or impossible otherwise. But are they always reliable and accurate? What are the potential pitfalls in their use? What are the long-term prospects for full integration into mainstream practice, and is the profession well-positioned to deal with it? These questions will be addressed by examining the results of various prediction competitions, experimental investigations, and case studies, ranging from Roman times to present. In the process, an number of *'inconvenient truths'* will be exposed, and *'tips for idiots'* suggested.

