



## To Infinity and Beyond – the Amazing Uses of Infinite Structure Mobility Theory

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### **Abstract**

What if there were simple formulae you could use to calibrate structural mobility measurements on beams, plates, pipes, large pressure vessels, aircraft fuselages, and other structures? What if those same formulae could be used to estimate the mobilities of structures that haven't been built? How about using them to estimate how mobility might change if you modify the material properties of an existing structure? Great news – these formulae exist, are simple enough to code in a spreadsheet in minutes, and are perhaps the most invaluable tools a structural-acoustician has. They simulate propagating waves in infinite structures, including beams, plates, and curved shells. In this plenary lecture I will explain these formulae and prove their worth with several practical examples.