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## A 'road test' of ANOVA versus DFT and LS as a period-finding algorithm

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The mathematical properties of harmonic functions have brought Fourier-based algorithms into popular use as period-finding tools in astronomy, specifically in asteroseismology. Recent work by Graham et al. (2013) has indicated that the ANOVA approach (see the many references by Schwarzenberg-Czerny) could outperform these traditional approaches in certain cases. Very little practical application of ANOVA has appeared in the literature, though. Given the rapidly growing body of time-domain data in astronomy and the considerable importance of some of the conclusions that have been made on the basis of these data, Graham et al.'s result prompts a closer look at ANOVA as a competitor to DFT and Lomb-Scargle (LS)-based methods in asteroseismology. In this presentation, the main findings of a comparative 'road-test' of ANOVA, DFT and Lomb-Scargle algorithms, applied to typical ground-based, time-domain data on pulsating stars will be presented and analysed.

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