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Applying text analysis to student explanations in PER SHEH LIT CHANG, PETER SHAFFER, University of Washington — Student explanations to written questions form the basis for many qualitative and quantitative studies into student understanding of physics. Explanations given by students to carefully constructed questions are categorized by one or more investigators and then interpretations are given to identify common patterns in student thinking and lines of reasoning. There are now computer programs that can quickly parse many paragraphs of text and identify common words, terms, and phrases. We are exploring their use in analysing student explanations systematically. In this paper, we describe the use of a computational text analysis program that corroborates results from prior qualitative methods of analysis in the context of two-dimensional motion and rolling motion.

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