The music composition *Determinations* used computer generated series of notes and rhythms in the construction of melodic and harmonic materials to create a musical work for tenor trombone and digital audio. While the composer chose the set of pitches and overall tonal structure used in this work, the use of computer algorithms helped to create patterns that the composer wouldn’t have conceived of otherwise. The use of digital audio synthesis and sequencing techniques expanded upon the sound of the acoustic instrument, creating timbres and phrases that are not possible within the constraints of the tenor trombone.