John F. Bukowski* (bukowski@juniata.edu), Department of Mathematics, Juniata College, 1700 Moore Street, Huntingdon, PA 16652. How Christiaan Huygens Tuned the Musical Scale.

The tuning of the intervals in the musical scale has a long history dating back to the Pythagoreans. Several seventeenth-century mathematicians proposed different approaches to resolving the inherent difficulties in tuning the musical scale. We will see how Christiaan Huygens used logarithms to divide the octave into a 31-tone scale, and we will compare his tuning to other tunings of the scale. (Received September 22, 2010)