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*Sequences, Modular Forms and Cellular Integrals.*

The Apéry numbers, which arise in the irrationality proofs for  $\zeta(2)$  and  $\zeta(3)$ , satisfy many intriguing arithmetic properties, and are also related to the  $p$ th Fourier coefficients of modular forms. We describe sequences associated to Brown's cellular integrals, of which the Apéry numbers are special cases. We discuss recent work on proving that the connection to modular forms persists for these sequences in general. (Received July 17, 2017)