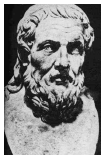


INTEGRAL APOLLONIAN GASKETS

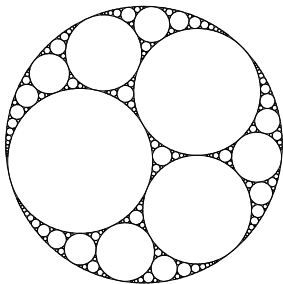
ALEX KONTOROVICH

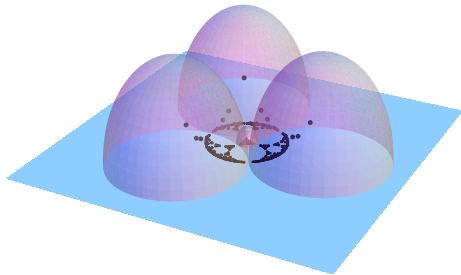
YALE UNIVERSITY

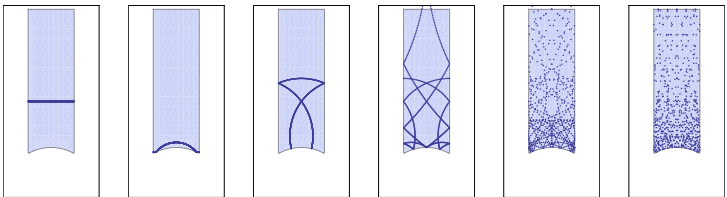


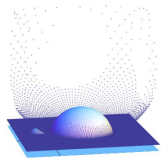
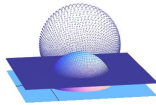
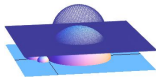
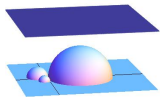


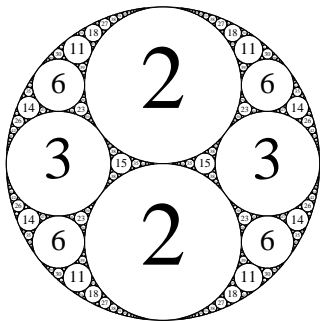
APOLLONIUS OF PERGA (262-190 BCE)

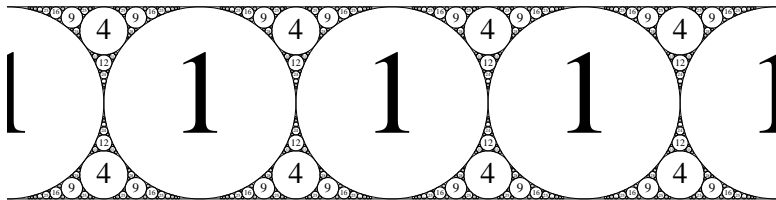


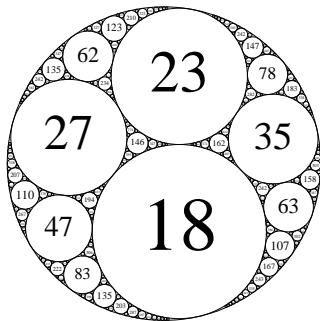














FREDERICK SODDY (1877-1956)

FROM: SODDY "THE KISS PRECISE", *Nature*, 1936

Four circles to the kissing come. \ The smaller are the bender.
The bend is just the inverse of \ The distance from the center.

Though their intrigue left Euclid dumb
There's now no need for rule of thumb.

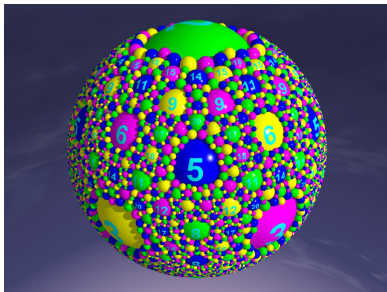
Since zero bend's a dead straight line \ And concave bends have minus sign,
The sum of the squares of all four bends \ Is half the square of their sum.

...

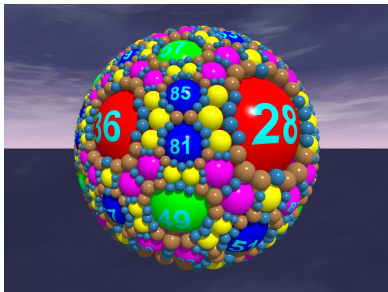
To spy out spherical affairs \ An oscular surveyor
Might find the task laborious, \ The sphere is much the gayer,

And now besides the pair of pairs
A fifth sphere in the kissing shares.

Yet, signs and zero as before, \ For each to kiss the other four
The square of the sum of all five bends \ Is thrice the sum of their squares.



(JOS LEYS)



(JOS LEYS)