Appendix B: Zometool

The models pictured in the images of this paper were constructed from a mathematical model kit call Zometool. The kits consist of balls and struts for representing points and lines in space. The pieces are based on the "31-zone system" generated by the edge midpoints, face midpoints, and vertices of the icosahedron. The struts are made with lengths in Golden Mean powers of one, cosine 30°, and cosine 18°. The mathematical precision of Zometool allows for an almost uncountable number of different designs to produced. They are extremely valuable for producing objects with 3-, 4-, and 5-fold symmetry, like the Platonic solids. (Although it is not possible to make regular tetrahedra and octahedra, close approximations can easily be used.) I found them an invaluable aid in producing this work, as I was able to construct accurate physical projections which I could study from any angle. For more information about Zometool, contact Zomeworks Corporation, Albuquerque, NM, or email zometool@aol.com.