

Warped Space-time Cuff

Sterling silver

Dimensions: 65 mm approx. diameter x 25 mm

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Inspiration:

Professor Lisa Randall

Lisa Randall's research in theoretical physics involves particle physics and cosmology, including fundamental forces and extra dimensions of space. She is known for her popular science book **Warped Passages: Unravelling the Mysteries of the Universe's Hidden Dimensions**. The cover of this book inspired a cuff-style bangle of sterling silver which is imprinted with a grid pattern. This pattern was distorted by strong forces in the roller-printing process used to create it. The entire bangle, and the dimensional grid along with it, was further and systematically deformed by anticlastic forging, resulting in a piece of jewellery reminiscent of visualisations of warped space-time.

Materials:

Sterling silver

Method:

A sandwich of sterling silver sheet, brass mesh (donated by the University of Queensland Physics Workshop) and brass sheet was passed through a rolling mill. The resulting roller-printed silver strip was curved into a bangle shape and then anticlastic forging was used to create a saddle form.

Results:

The force that the silver was subjected to during roller-printing created a grid pattern on the silver; the force was strong enough that the mesh was distorted and the silver was patterned with a warped grid, reminiscent of visualisations of warped space-time. By applying forces in a systematic fashion through anticlastic forging, the metal was shaped into a saddle form with perpendicular curvatures (and a classic jewellery shape).

Box made from salvaged Australian native timbers by Gary Field for Labpunk and AIP Congress 2014.

(Red Cedar lid and Silky Oak body)



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