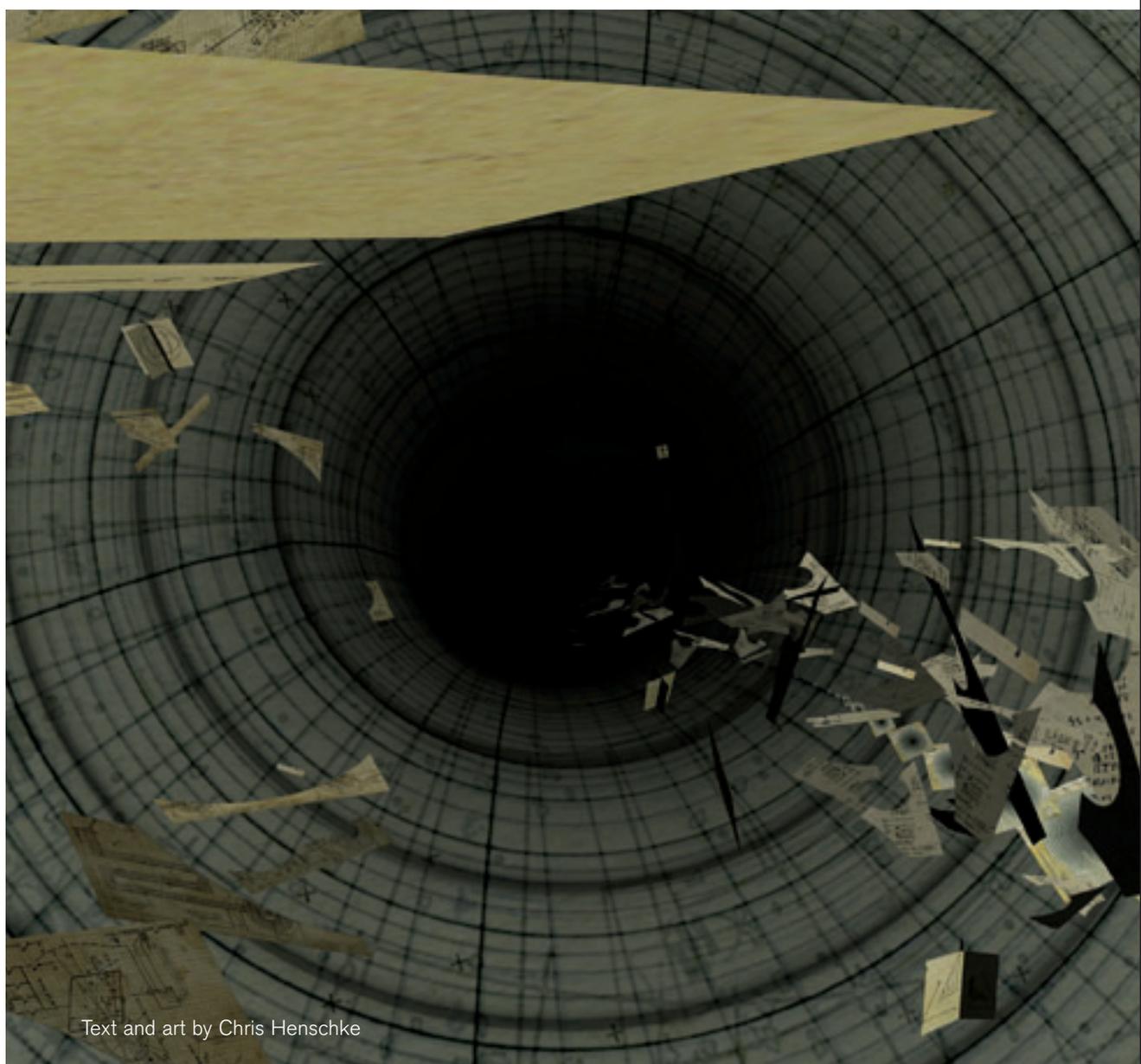


HyperCollider In 1905, Albert Einstein published his Special Theory of Relativity and overthrew the notions of absolute space and time. His later General Theory of Relativity was so revolutionary that even he had trouble accepting its full implications.

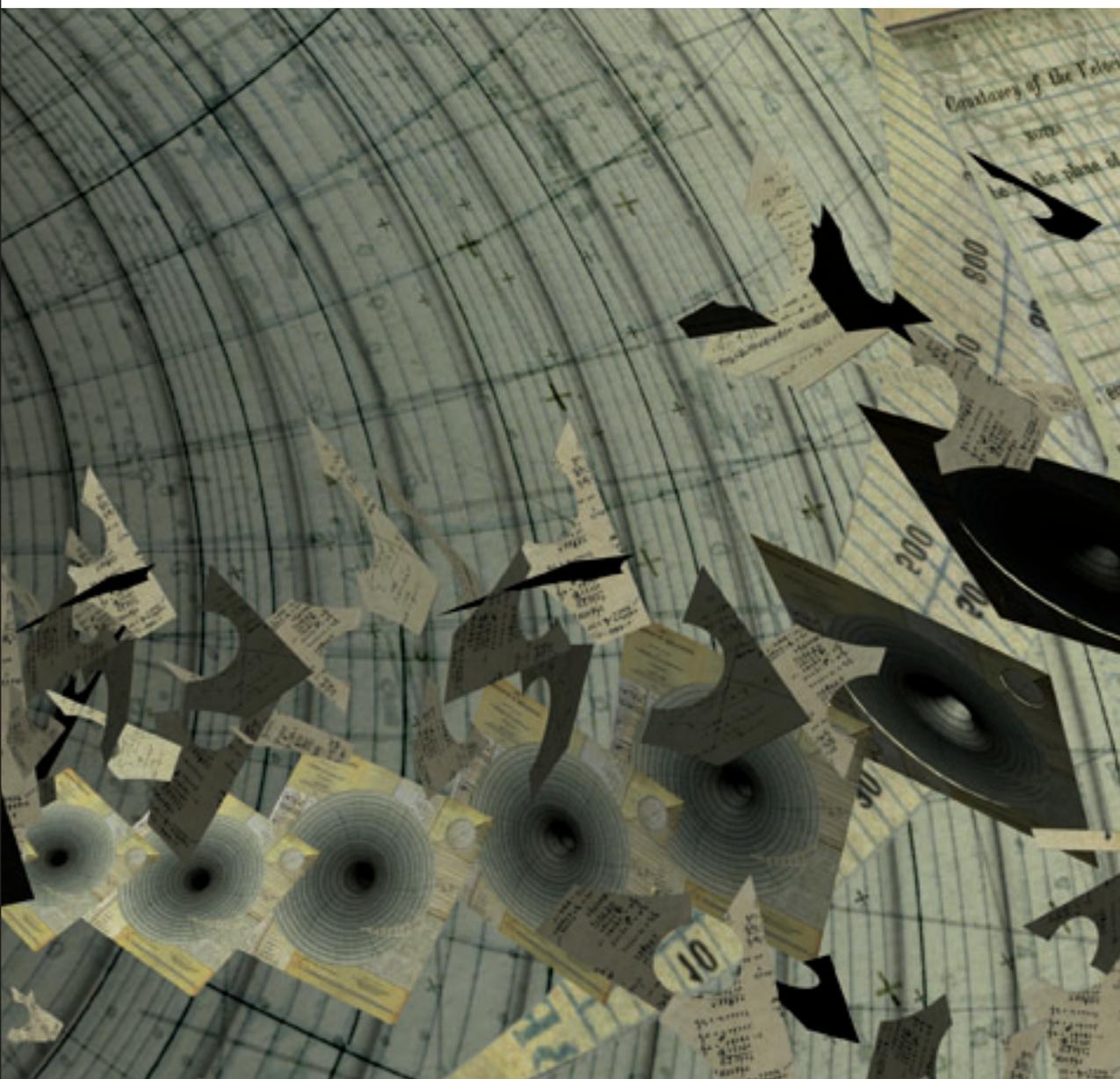
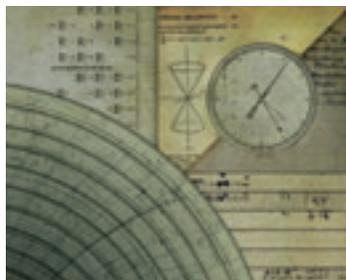
HyperCollider explores the extremes of relativity and how they disturbed Einstein's own cosmological philosophy of a balanced, logical, and eternal universe. It also plays with the unease that exists between the macroscopic worlds of relativity and the ultramicroscopic quantum universe, and the difficulties Einstein had with his colleagues' theories on quantum mechanics and its "uncertain" implications.

Explore *HyperCollider* online at www.symmetrymagazine.org



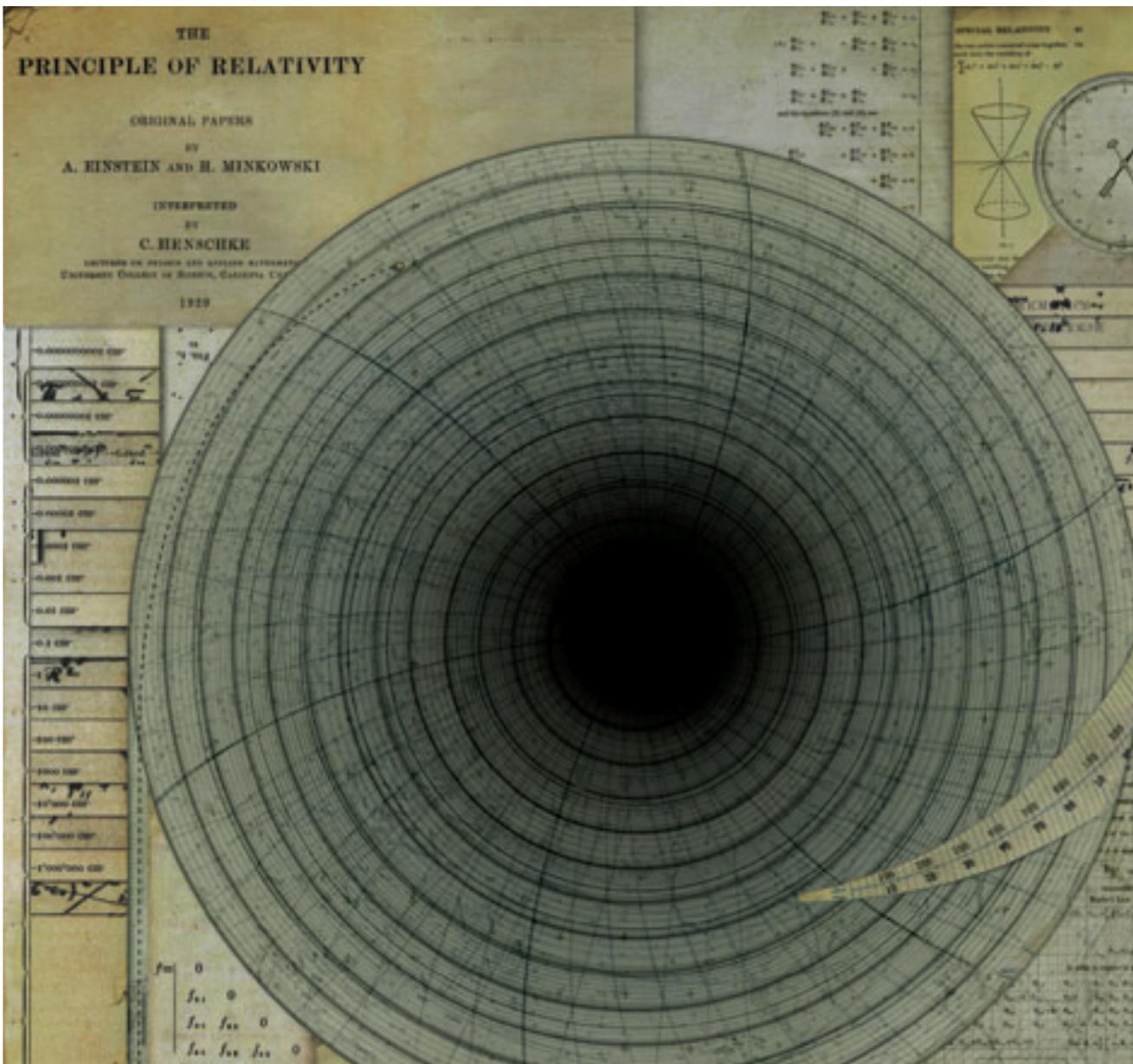
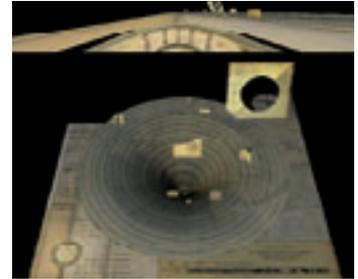
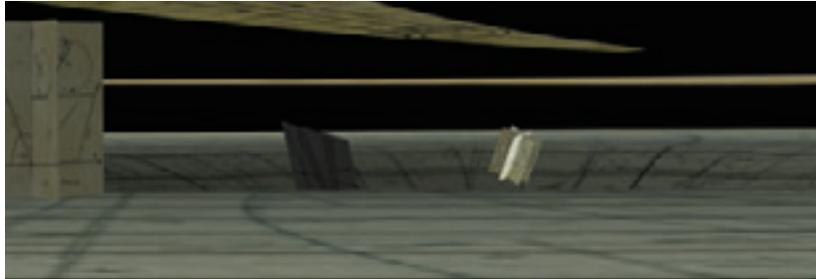
Text and art by Chris Henschke

HyperCollider exhibited in a former convent infirmary converted into a gallery space, Daylesford (Victoria, Australia), November 2004.



Smolin Multiverse Vortex, 2004 (detail). This image is inspired by Lee Smolin's theory that within each black hole a new universe is born, each with its own laws of physics, creating a "multiverse" of cosmoses that evolve toward optimum black hole production.

Top left: "Particle View," showing "Tone-arm," "Action Bumpers" (with diagrams of classical versus relativistic space-time), and gravity well. Top right: Interface of the online version.



HyperCollider, top view showing the "Geometrodynamic Vortex," "Observer Time" clock, "Particle Time" counter (measured in Planck time units), and particle-launching "Accelerator Ring."

A collage of Einstein's relativity papers, handwritten notes, pressure graphs, and star charts is combined with a computer display running a simulation within a remade 1920s German pinball machine to make the *HyperCollider* exhibit. A hybrid of pinball game, gramophone player, and "particle accelerator," *HyperCollider* lets players launch various matter particles into a "theoretical universe." The particles collide with each other and get pulled into a black hole, which displays spatial contraction and temporal dilation effects. By bouncing particles into the black hole, players can move through time into an increasingly uncertain future, accompanied by a "pop-science-pop-music" soundtrack.

The project was created during Chris Henschke's time as the inaugural "online artist-in-residence" with the National Gallery of Australia in 2004 and was supported by the Film Victoria Digital Media Fund. HyperCollider is currently touring Australia and will be exhibited internationally in 2006. Visit www.topologies.com.au for details.

