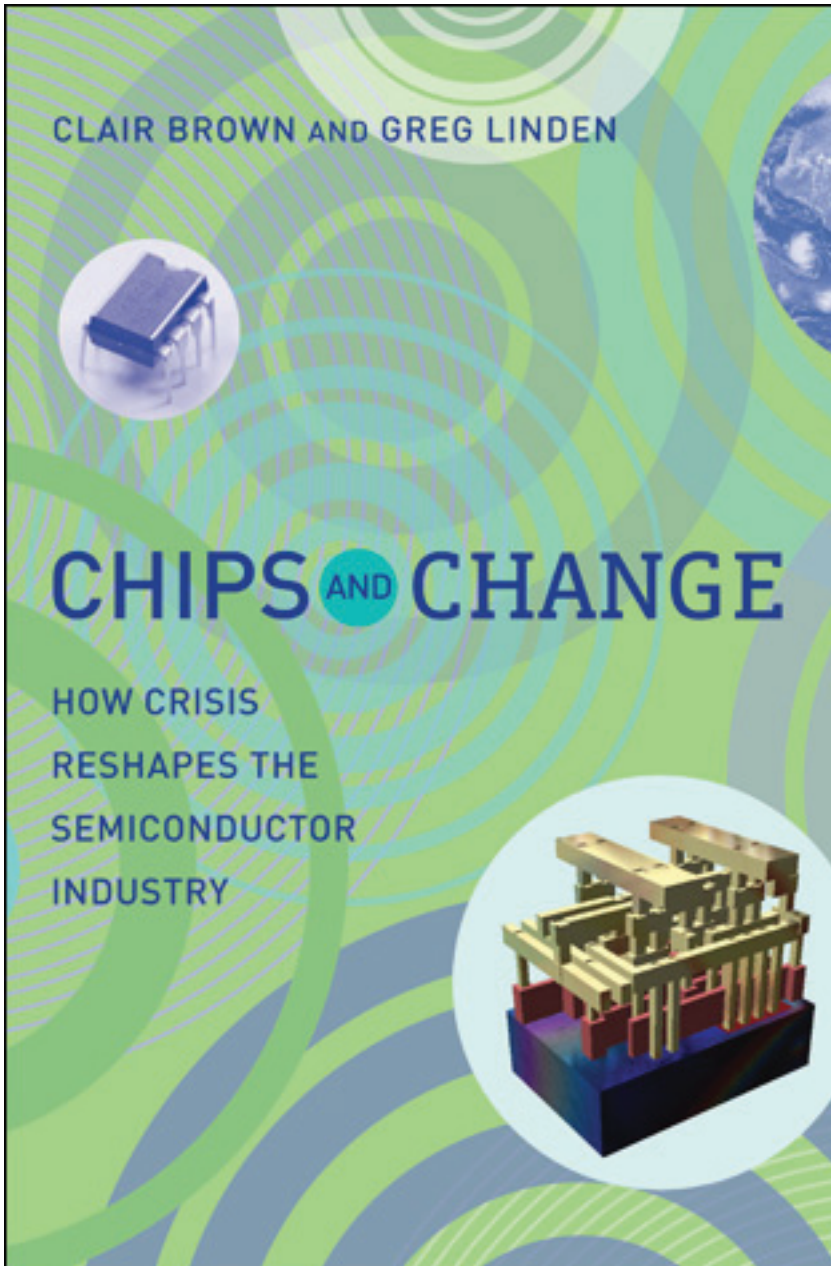


The new book from MIT Press

Chips and Change

How Crisis Reshapes the Semiconductor Industry



For decades the semiconductor industry has been a driver of global economic growth and social change. Semiconductors, particularly the microchips essential to most electronic devices, have transformed computing, communications, entertainment, and industry. In *Chips and Change*, Clair Brown and Greg Linden trace the industry over more than twenty years through eight technical and competitive crises that forced it to adapt in order to continue its exponential rate of improved chip performance. The industry's changes have in turn shifted the basis on which firms hold or gain global competitive advantage.

These eight interrelated crises do not have tidy beginnings and ends. Most, in fact, are still ongoing, often in altered form. The U.S. semiconductor industry's fear that it would be overtaken by Japan in the 1980s, for example, foreshadows current concerns over the new global competitors China and India. The intersecting crises of rising costs for both design and manufacturing are compounded by consumer pressure for lower prices. Other crises discussed in the book include the industry's steady march toward the limits of physics, the fierce competition that keeps its profits modest even as development costs soar, and the global search for engineering talent.

Other high-tech industries face crises of their own, and the semiconductor industry has much to teach about how industries are transformed in response to such powerful forces as technological change, shifting product markets, and globalization. *Chips and Change* also offers insights into how chip firms have developed, defended, and, in some cases, lost global competitive advantage.