Colin Ware looks at columns of numbers and points on a graph and sees moving swirls of color, neon rainbow mountains, whales diving and looping and lunging. And, as director of the Data Visualization Research Lab within the UNH/NOAA Center for Coastal and Ocean Mapping (CCOM), he helps others see data the same way. “Although I like pretty pictures, I’m more interested in making things that help you think about data,” says Ware, who is professor of both computer science and ocean engineering. Ware applies the psychology of perception and computer science to oceanographic data to render lively, easily grasped scientific concepts.

His own career path took as many twists and turns as the humpback whales he’s studied in Antarctica, winding from visual art to human perception to computer science to psychology. “He brings all these skills together in a magical way that has allowed us to visualize and explore complex data sets in natural and intuitive ways,” says CCOM director Larry Mayer. Ware's research portfolio is rich in the currency of academia, boasting two books and more than 100 articles that explore the theory and practice of using color, design, and motion to display data effectively.

On the practical side, he’s contributed to the development of tools like Fledermaus and GeoZu4D that—once revolutionary—have become the standard in ocean mapping and data visualization. More recently, he created TrackPlot, a whale behavior visualization software that's helped marine mammal biologists discover new humpback whale feeding strategies. “This software has also been my passport to cruises on Stellwagen Bank and to Antarctica,” says Ware. Ware's work is not exclusively for shipboard scientists, however. Visitors to Washington, D.C.'s Smithsonian Museum of Natural History can watch his global ocean currents swirl around the room-sized Science on a Sphere exhibit. At the Seacoast Science Center in Rye, N.H., an interactive touch screen display Ware developed lets museum-goers "touch" the currents and tides in the Piscataqua River. “A map these days is no longer a piece of paper,” he says. “My job is to push the bounds of what a map or chart is.”

—Beth Potier