

Pål Wessel (1959 - 2024)



Pål Wessel, known as Paul within the geoscience community, developed the Generic Mapping Tools (GMT) software that has been widely used by seismologists and other geoscientists since the 1990s. Pål recently passed away at the age of 64.

Pål was born and raised in Sarpsborg, Norway, and attended the University of Oslo where he earned his BS and MS in applied geophysics in the early 1980s. It was in Oslo that Pål first learned the joys of programming by developing code to organize local table tennis tournaments. He put these skills to use in his MS thesis, writing codes to plot the output of gravity inversions of the Oslo Graben. Pål went on to do PhD research with Tony Watts and Bill Haxby at Columbia University, working with marine gravity data. Pål defended his PhD in the fall of '89.

It was at Columbia that Pål and his officemate Walter H. F. Smith, coding day and night and subsisting on frozen burritos, developed the first version of the Generic Mapping Tools (GMT) in 1987. This was an open-source software package for the processing, displaying, and mapping of multi-dimensional data. GMT evolved rapidly, growing over the years with the help of many volunteers worldwide, to become the staple tool for tens of thousands of researchers in the Ocean, Earth, and Planetary sciences. With GMT, Pål made modern map-making techniques available to geoscientists everywhere. This opened new possibilities for analyzing and visualizing data, just in time for the rush of modern geoscience data that streamed from seismic networks, satellites, and various other detectors in the 1990s and the decades to follow. GMT became the backbone behind the visualizations within countless publications, PhD theses, and real-time mapping of data on the internet.

Pål spent nearly his entire career at the School of Ocean and Earth Science and Technology (SOEST) at the University of Hawai'i at Mānoa (UHM). He moved to Honolulu in 1990 for a postdoctoral position, and soon joined the faculty of the Department of Geology and Geophysics (now Earth Sciences) UHM in 1991. In the years to follow, Pål wrote and contributed to well over 100 peer-reviewed research publications (and still counting) with ~30,000 citations, describing major contributions to marine geophysics. Paul developed plate tectonic reconstructions with the "Hotspotting" method, analyzed flexure of the lithosphere, characterized the Earth's seamount population, and always continued his remarkable development of scientific software. He wrote two textbooks that he distributed to students and instructors free of charge. For these efforts, Pål was awarded a University of Hawai'i Board of Regents' Medal for Excellence in Research, was named a Fellow of both the Geological Society of America and the American Geophysical Union, and received the European Geoscience Union's McHarg Medal in Geoinformatics.

At SOEST, Pål was a trusted, kind, committed, and all-around exemplary colleague. He brought in millions of dollars in grant money and worked on four seagoing research vessels that brought him around the world. He pushed for more inclusive and modernized working environments and served twice as department chair,

challenging the university bureaucracy along the way. As the department chair, the infamous shark aloha shirt defined his signature uniform during faculty meetings. Pål particularly loved teaching data analysis and programming classes, putting much effort into making his classes unforgettable with jokes, games, prizes, podcasts, and more.

Pål loved his family and friends. Pål met his wife during his first week after moving to Hawai'i, and they were married the same year. Before kids arrived, the couple biked around Tasmania and southern Australia, hiked in the Peruvian Andes, journeyed into the upper Amazon, Bolivia, & northern Chile, camped in Iceland and Norway, and hiked the outer Hawaiian Islands. With the addition of their two children, long camping road trips to exotic locales became a defining part of family life. Yearlong sabbaticals to Norway, Australia, San Diego, and England included memorable trips traversing the vast Australian outback, camping across North America, and roaming among the varied countrysides of Norway, Sweden, Denmark, and England.

Pål met stressful situations with an unflappable and sometimes silly approach that relieved tension and brought lightness to life's challenges. Amongst colleagues, friends, and family, Pål was always known for his humor, kindness, care, and easygoing nature. He was very generous with his time, he was the embodiment of integrity, and he genuinely cared about others. He will be missed by colleagues in Hawai'i, collaborators worldwide, and by friends that he made everywhere he went.

In the fall of 2022, Pål and his wife retired to his home country of Norway, with plans to pursue research projects out of the University of Oslo, where he first learned scientific programming. Yet, Pål did not have time to realize these goals for his life's next chapter. In the summer of 2023 he managed to host a GMT summit at the University of Oslo, and he returned to Hawai'i for one final visit. Pål concluded a 3.5- year battle with cancer on March 26, 2024, peacefully at home in Norway in the loving company of his wife and two children, and with the support of his two siblings and good friends.

Clint Conrad, University of Oslo, Garrett Ito, University of Hawai'i, Walter Smith, NOAA and David Bercovici, Yale University
