

Jerome ‘Jerry’ M. Paros

Jerome “Jerry” Paros grew up in Springfield, Massachusetts, with an early fascination for the physical sciences. He earned an undergraduate degree in physics from the University of Massachusetts, followed by a graduate degree in physics from Columbia University.

In the 1960s, the scientific instrumentation industry was dominated by analog technology. Recognizing the limitations of these analog systems, Jerry developed and patented digital, time-based sensors using quartz crystals. By utilizing the piezoelectric properties of quartz, his transducers could convert from physical parameters like pressure and acceleration to frequency that can, in turn, be directly converted to a digital signal.

In 1972, Jerry founded Paroscientific, Inc. in Redmond, Washington, to manufacture his patented® Digiquartz transducers and related systems. Later, he also founded Quartz Seismic Sensors, Inc and related companies that use the quartz crystal resonator technology. His instruments achieve parts-per-billion resolution and 0.01% typical accuracy even in harsh environmental conditions. These sensors have become the industry standard being integrated into his designs for instruments applied to the fields of

- Physical oceanography – water pressure to monitor sea-level changes and tides.
- Atmospheric Sciences – Tracking minute changes in barometric pressure for meteorology and climate study.
- Seismology – Detecting seafloor deformation and micro-seismic activity, geohazards and disaster warning.

Today, his deep-ocean pressure sensors are globally deployed on ocean seafloors to measure the weight of the water column, allowing oceanographers and geophysicists to detect tectonic shifts and early signs of tsunamis.

Jerry has dedicated a large portion of his success to philanthropy. He has supported ten endowed chairs as well as research centers across the country, including: The Paros Center for Atmospheric Research at the University of Massachusetts, The Jerome M. Paros Endowed Chair in Seismology and Geohazards at the University of Washington, The Paros Lamont Research Professorship in Climate Science Research and Carbon Management at Columbia University. He also supports scholarships in Geophysical Instrumentation through the American Geophysical Union (AGU) and now Paros Scholarships in Precision Engineering through the American Society for Precision Engineering (ASPE).

Jerry holds more than 50 patents and has authored many papers and articles about scientific instrumentation. He is a fellow of the International Society of Automation and received the Si Fluor Technology Award in 1980 and the Albert F. Sperry Founder’s Award in 2006. The University of Massachusetts honored Jerry with their Distinguished Achievement Award in 2011 and a Doctor of Science degree in 2022 when he delivered the [commencement speech](#) to the UMass College of Engineering.

Jerry remains active in the scientific community starting his daily process of invention by sketching on paper and constructing mechanical models to create innovative solutions for the ultra-precise and accurate sensors of the future. Adjacent to his office is his “Museum of Mistakes and Occasional Good Ideas”. It is humbling to realize that these good ideas have become the bedrock of real-time measurement spanning many fields of geological science.