

RESUMÉ
Peter Martin
2020

Brief

28 years experience in technical support of oceanographic and hydrographic missions. Extraordinary improvisational skills in electronics, data manipulation by means of mathematics and coding, and mechanics. Notable familiarity with analog power- and signal electronics. Current specialty is “embedded engineering”, i.e programming and interfacing microcontrollers, including familiarity with Special Function Registers, with the essential importance of interrupts for timing, and with assembly language for MIPS and Arm Cortex processors.

Formal education

2006 - Received New Zealand International Doctoral Research Scholarship; pursued studies at University of Otago 2006 - 2009. Area of research: the physics of information, and the relation between spatial- and temporal "order". Terminated enrollment July 2009 for practical reasons.
2004 - Master of Science, Oregon State University. Major: Geographic techniques; minor: Oceanography. Thesis: "[Spatial Interpolation in Other Dimensions](#)".
1977 - Bachelor of Arts, University of New Mexico. Major: Spanish language; minor: Philosophy. Secondary teacher certification: General Science, Mathematics, and Spanish.

Occupational brief

1982 - 2020 Partnership Martin & Riener. Recent contract work 1998 - present has been primarily as research and development engineer and as science-support technician, providing electronics-tech and information-tech (computer / data) as well as operational services aboard oceanographic- and hydrographic research vessels. Current specialization has been low-level programming and interfacing of microcontrollers: PIC32 (MIPS M4K CPU) and STM32 (Arm Cortex M3 and M4 CPU).
1990 - 1998 -- provided services as radio officer (radiotelegraph operator) aboard research, commercial, and fishing vessels.
1982 - 1990 -- Early contracts were mainly resource-management service contracts for government agencies, including maintenance and construction work on trails, cabins, airstrips, and recreation facilities; fire lookout; and boundary surveying.
1977 - 1982 Field work with helicopter-portable geophysical exploration crews in the western U.S.

Contract client history (see also [Martin & Riener](#) web site, [Contract History](#) page.)

- **Seafloor Systems, Inc.** – various times, U.S. inland waters, Gulf of Mexico, Caribbean, and shoreside R&D work, 2005 – 2019. P.O.C. John Tamplin, president.
- **Oceanering, Inc.** – after acquisition of C & C Technologies, brief stint mobilizing vessels for wind-farm survey, U.S. Northeast coast, 2018. P.O.C. Richard McGee, Project Development Manager, Bothell office.

- **Williamson & Associates** – various times, worldwide, 2000 – 2014. P.O.C. Mike Williamson, president (now retired), or Art Wright, survey manager (also moved on).
- **C & C Technologies, Inc.** – Seattle, 2014, and Alaskan waters, 2011 and 2012. P.O.C. Richard McGee, former general manager, C&C West Coast division.
- **Teledyne Benthos, Inc.** – 2011 *pro bono* work. P.O.C. Straud Armstrong, sales engineer, at L-3 Klein last I knew.
- **Paterson-Pitts Group** – various times, New Zealand, 2010 – 2011, *pro bono* work. P.O.C. Nigel Pitts, original partner, or Dr. Peter Knight, associate.
- **Aquatics Environmental Services, Inc.** – various times, Canadian arctic and inland waters, 2007 – 2009. P.O.C. Darwin Monita, owner at that time.
- **Raytheon Polar Services Company** (and predecessor **Antarctic Support Associates**) – various times, Antarctic waters, 50 W – 170 E. P.O.C. At that time Jim Holik or Jesse Doren.
- **Science Applications International Corporation** (via **Williamson & Associates**) – NOAA hydrographic survey, two occasions, 2005 – 2008, U.S. northeast coast and Gulf of Mexico. P.O.C. At that time Paul Donaldson or Gary Parker.
- **Micro-Seismic, Inc.** – continental U.S. and northern Alberta, Canada, 2003 – 2004. P.O.C. At that time Herbert Barrow, geologist.
- **Woods Hole Oceanographic Institution** – Antarctic Peninsula, 2002. P.O.C. At that time Peter Wiebe, senior scientist, or Carin Ashjian, associate scientist.
- **Oregon State University, College of Oceanographic and Atmospheric Sciences** – 2002, *pro bono* work. P.O.C. At that time Tim Boyd, research associate.
- **Lamont-Doherty Earth Observatory, Columbia University** – worldwide, sailing as Radio Officer 1991 – 1996. Last known P.O.C. Paul Ljunggren, Marine Superintendent.

Miscellaneous credentials, current and past

FAA Private Airman, single-engine land / sea; FCC 1st-Class Radiotelegraph w/Radar Endorsement; FCC Extra-class Amateur Radio; USCG Radio Officer.

Professional membership:

IEEE, IEEE Oceanic Engineering Society, IEEE Information Theory Society.

Publications:

- "[Difference principle and black-hole thermodynamics](#)", unpublished. arXiv:0906.4849v1, 2009.
- "[Space, freedom, and law: Maybe space is all that matters](#)", *Proceedings of the 19th Annual Colloquium of the [Spatial Information Research Centre](#) (Dunedin, New Zealand, December 6 - 7, 2007): 71-80, 2007.*
- "[Gravity from a probabilistic point of view](#)", *American Institute of Physics Conference Proceedings 954 (MaxEnt 2007 conference of Bayesian Inference and Maximum Entropy methods in physics and engineering, Saratoga Springs, New York, July 8 - 13, 2007): 185-192, 2007.*
- "[Probability as a Physical Motive](#)", *Entropy*, 9: 42-57, 2007.

- "Spatial analysis through the looking glass", *Solstice* (Journal of the Institute of Mathematical Geography), 18(1), June, 2007.
- "Beginning research on the quantification of spatial order", *Proceedings, SIRC 2006* 18:109-125.
- "Cross-discipline analogy: Information impedance matching", *Solstice*, 15(2), December, 2004.
- "Energy flow and spatial and temporal patterns", *Solstice*, 15(1), June, 2004.
- "Southern ice: Commentary on shipboard remote sensing in Antarctica", *Backscatter* (Journal of the Alliance for Marine Remote Sensing), 11(3), 36-38, 2000.