

## MITCHELL G. ROTH

PO Box 1290  
Girdwood, AK 99587



### EDUCATION

**Ph.D., Computer Science**, Minor: **Mathematics**, 1981.  
University of Illinois, College of Engineering, Urbana, IL

**M.S., Computer Science**, Minor: **Electrical Engineering and Systems Science**, 1973. Michigan State University, College of Engineering, E. Lansing, MI

**B.S., Mathematics** (with Honors), 1973. Michigan State University, Honors College, E. Lansing, MI

### EMPLOYMENT

- Professor Emeritus, Computer Science and Software Engineering, University of Alaska Fairbanks, 2008-2020
- Chairman, Department of Computer Science, University of Alaska Fairbanks, 2004-05
- Professor of Computer Science and Software Engineering, University of Alaska Fairbanks, 1995-2008
- Scientific Director, Arctic Region Supercomputing Center, University of Alaska Fairbanks, 1992-95
- Associate Professor, Department of Mathematical Sciences, University of Alaska Fairbanks, 1983-95
- Director of GIS, SETPOINT/Alaska, Anchorage, AK, 1982-83
- Visiting Associate Professor, Mathematical Sciences Department, University of Alaska Anchorage, 1982
- VLBI Task Manager (Voyager Navigation), NASA/Jet Propulsion Laboratory, Pasadena, CA, 1979-1982
- Research/Teaching Assistant, Department of Computer Science, University of Illinois, Urbana, IL, 1975-79
- Research Associate, Department of Meteorology and Climatology, Iowa State University, Ames, IA, 1974-75
- Research Assistant, Department of Agricultural Engineering, Michigan State University, E. Lansing, MI, 1970-74

### SUMMARY

As a young boy watching Sputnik orbit the night sky over Iowa, Dr. Roth first marvelled at science fiction turned into reality. Over the next 50 years, he participated in and contributed to the foundations of modern computing and communications technology, all of which is no longer science fiction. In more than 50 technical publications, Dr. Roth has developed and advanced computing technology in areas as diverse as agricultural grain processing and storage, spacecraft navigation (Voyager, Galileo, Cassini, GPS), artificial intelligence, virtual reality, plate tectonics, genome analysis, supercomputer design, cybersecurity and global environmental simulations.

At the University of Alaska Fairbanks, Dr. Roth developed the Computer Science undergraduate and graduate degrees and was the first head of the Computer Science department. In 1992, Dr. Roth helped found the Arctic Region Supercomputing Center as Scientific Director, where he developed specifications for 3 generations of Cray supercomputers. During his long academic career he taught over 100 semester courses in computer science and supervised dozens of graduate students that prepared the next generation of computer scientists to turn science fiction into reality. Since retiring from UAF, Dr. Roth has turned his attention to the problem of global warming and specifically to the replacement of atmosphere-altering fossil fuels with clean renewable energy sources.

## **MEMBERSHIPS**

Aircraft Owners and Pilots Association (AOPA)  
Seaplane Pilots Association (SPA)  
Alaska AFSCME Retiree Chapter 52, AFL-CIO  
Retired Public Employees of Alaska, (RPEA)  
Association for Computing Machinery (ACM)  
Institute of Electrical and Electronics Engineers (IEEE)  
The Planetary Society  
United States Tennis Association  
Pacific Northwest Tennis Officials Association  
Alaska Climate Action Network (AK-CAN!)  
Citizens Climate Lobby (CCL)  
The Alaska Center

## **PUBLIC SERVICE**

- Faculty Sponsor, Alaska High School Programming Contest ('85-'90)
- Judge, Fairbanks North Star Borough Science Fair ('87, '02-'06)
- Judge, Alaska State High School Science Symposium ('99-'00, '07)
- Moose Mountain Alpine Sports Club, Race Timing ('98-'07)
- KUAC Fall Festival, fund-raising volunteer ('99-'01)
- Fairbanks Figure Skating Club, Vice-President, Treasurer & Webmaster ('01-'05)
- Alaska Summer Research Academy, Lead Instructor('02, '03)
- West Valley High School, JV Tennis Coach ('05-'07)
- Fairbanks Tennis Association, Webmaster ('05-'07)
- Golden Valley Electric Association, Member Advisory Committee ('06-'07)
- United States Tennis Association, Certified Official ('06- )
- BNP Paribas Open (Indian Wells), Volunteer ('07 - )
- United States Ski Association, Alpine Official (Race Timing) ('09-'16 )
- Alyeska Ski Club, Computer Support ('10 -'15 )
- Arctic Winter Games (Fairbanks), Race Timing ('13)
- Girdwood Tennis Committee, Member ('14 - )
- Pacific Northwest Tennis Officials Association, Board of Directors ('14 - ), Vice-President ('17), Secretary ('18 - )
- Alaska Tennis Association, Board of Directors ('14 - )
- IEEE Alaska Section, Executive Committee, Secretary ('19 - )
- Chugach Electric Association, Bylaws Committee ('20 - )

## **PERSONAL**

Dr. Roth retired from UAF in 2008 and now resides in Girdwood, Alaska, where he enjoys hiking, fishing, motorcycling, skiing and tennis. He is married to Dorothy Corbett and has one daughter.