

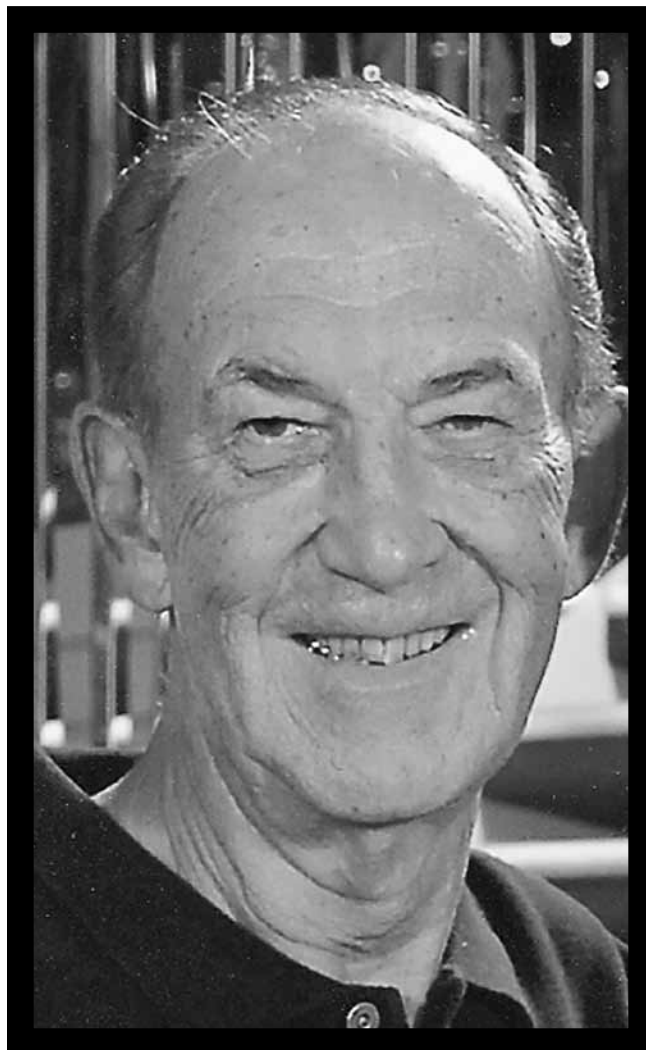
IN MEMORIAM

PAUL J. LIENAU, 1937 - 2008

Paul was born in Mitchell, South Dakota on January 20th, 1937 and moved to Rapid City, South Dakota where he graduated from high school. He received a B.S. degree in Physical Science from Black Hills State University in 1959, and a M.S. degree in Physics from Temple University in 1963. He taught physics at Oregon Institute of Technology from 1968 to 1974 as an Assistant and Associate Professor in the Math/Physics Department. In 1974, Paul and others hosted an International Geothermal Conference on the OIT campus. He and John Lund edited the Proceedings from the conference, and due to their interest in geothermal energy, along with Gene Culver and Lars Svanevik formed the Geo-Heat Utilization Center in 1975. Paul became the first Director of the Center, which later became the Geo-Heat Center. The directorship started as a part-time position, but with financial support from various contracts and grants, became a full-time position which he held until he retired in 1996.

During his tenure as Director of the Geo-Heat Center, Paul wrote many grants and participated in various professional organizations that help to fund the Center's work and promoted its reputation, both nationally and internationally. He was a member of the Geothermal Resources Council (GRC), the International Geothermal Association (IGA), and the Klamath County Economic Development Association (KCEDA). In 1982 he and Colleen travelled to New Zealand where he lectured and did research at the Geothermal Institute, University of Auckland for three months. In 1988, he and his wife Colleen spent three months in China at Tianjin University lecturing at the Geothermal Resources and Training Center. He also visited Iceland, France, Italy and Japan in connection with his geothermal work. He developed the Geo-Heat Center into a nationally and internationally recognized center of excellence, specializing in the direct-use applications of geothermal energy. He, along with Ben Lunis, assembled and edited the Geothermal Direct-Use Engineering and Design Guidebook in 1991, which became the main reference for direct-use of geothermal energy worldwide, and has now gone through three editions. This publication was later translated into Turkish and Polish. He also started the Geo-Heat Center Quarterly Bulletin devoted to practical applications of geothermal energy, and this journal continues to be published today. As Director he also started the technical assistant program that provides information and help to developers and operators of geothermal direct-use projects in the U.S. and throughout the world. As many as 1,000 technical assistance inquiries were handled each year. With Toni Boyd he started the Center's website that has made available many geothermal publications and the location of geothermal resources to the public. Under his leadership, the Center received a Geothermal Special Achievement

Award from the Geothermal Resources Council (GRC) in 1993. He also received the Geothermal Pioneer Award from GRC in 1997. He wrote numerous papers on geothermal energy, along with performing research mainly funded by US Department of Energy contracts and grants. After retiring from the Center in 1997, he and Colleen moved to Camano Island, Washington. In Washington he was involved in many local activities, and visiting his sons and grandchildren. He passed away on September 27, 2008.



DEREK FREESTON, 1929 - 2010

Derek was born in Leicester, England on May 16th, 1929. He completed his trade qualifications as an aeronautical fitter on a government training award at the Royal Aircraft Establishment in 1947, and a degree in engineering from the University of London in 1952. He then took a three-year commission in the Royal Air Force Transport Command where he was the engineering officer in charge of the maintenance of a squadron of aircraft. In 1958 he started a teaching and research career at Rugby College of Engineering Technology. He worked on ventilation systems for large engines and ran a course on diesel design that attracted students from around the world. Seeking new challenges he immigrated with his family to New Zealand in 1969. In New Zealand he took up a post in the new Engineering School of Auckland University in the Department of Mechanical Engineering. He was initially interested in wind engineering where he carried out wind tunnel studies of models of major tower blocks proposed for downtown Auckland and Wellington as well as work on shelter belts for the developing New Zealand horticultural industry.

He then became interested in geothermal energy and worked with a series of postgraduate students on two-phase flow. In 1979 he was involved in setting up the Geothermal Institute at the University of Auckland under the United National Development Program. He took a sabbatical leave in 1981 and visited programs in China, Iceland and the USA, which include three months working at the Geo-Heat Center on the Oregon Institute of Technology campus as a visiting scholar. In 1985 and 1989 he spent three months in the Geothermal Department of Tianjin University in PR of China, and visited other geothermal sites in Europe, the Americas, Africa and Asia. He was one of the main lecturers in the Geothermal Institute, and was known for his expertise in the direct-use of geothermal energy. He retired from the University in 1992, but continued to give guest lectures and provide consulting around the world. He wrote the world update on direct-use for the 1995 World Geothermal Congress (WGC 1995) held in Florence, Italy, and co-authored the direct-use update for WGC 2000 (with John Lund), and WGC 2005 and WGC 2010 (with John Lund and Toni Boyd). He participated in all the World Geothermal Congress and presented several papers at these venues, but due to ill health he was unable to attend WGC 2010. Derek was also a member of the International Geothermal Association Board of Directors. He received a Special Achievement Award from the Geothermal Resources Council in 1993, recognizing his contribution to geothermal energy development throughout the world.

His professional contribution has left a lasting legacy through the hundreds of engineering students he has taught and his work with a host of professional engineers in many levels of government and private practice in New Zealand and many countries abroad. He was truly a Geothermal Pioneer.



He died peacefully in New Zealand on October 9th, 2010. Derek is survived by his wife Yvonne, his three children Marion, Mark and Janet, and their families comprising nine grandchildren and one great grandchild.

KIRIL POPOVSKI, 1943-2010

Kiril was born in Macedonia on July 17, 1943. He attended the University of Edvard Kardelj, in Ljubljana Slovenia and received a BSc in Mechanical Engineering in 1967, a MSc in Mechanical Engineering – Energetics in 1975, and a PhD in Technical Sciences in 1984. His major work at the university was in the design of district heating systems and the heating of greenhouses with geothermal energy. He did two post PhD studies, one in Italy and the other in New Zealand. He became a lecturer at St. Kliment Ohrid University in 1989 and later became the chair of the Thermoenergetics & Thermotechnics department and dean of the Faculty of Technical Sciences.

In 1989 he started the International Summer School on Direct Application of Geothermal Energy under the International Geothermal Association (IGA). He organized all the annual conferences which were held in many European countries with invited lecturer teaching students from local universities. The Summer School was held in Klamath Falls, Oregon in 1999, the only time it was held outside of Europe. He was the president of the Macedonian Geothermal Association, a member of the International Geothermal Board of Directors and Chairman of the European Forum under IGA. He was also the Manager of the Central Organization for Development and Investments in the Agriculture of Macedonia, and Technical Manager of the District Heating Company of Skopje, Macedonia. He was responsible for editing and publishing many proceedings from geothermal conferences. He wrote the geothermal country update paper on Macedonia for the World Geothermal Congresses along with many other papers on geothermal energy. He was best known for his expertise on the design of geothermally heated greenhouses.

He was working on geothermal projects, often late into the night, right up until he died on October 22, 2010. He was truly one of the geothermal pioneers.

