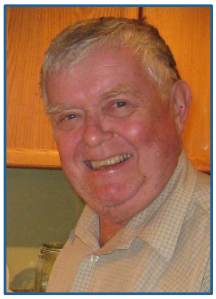
BIRGER BERGERSEN (1938-2025)



Birger Bergersen was born in 1938 in Oslo, Norway, to Benedicte Nicolaysen and Birger Bergersen, a Norwegian anatomist and politician [1]. He spent much of his childhood in Sweden during the Second World War. He later attended the University of Trondheim, where he completed a degree in engineering. After graduation, he received a Wein Scholarship to study at Brandeis University in Massachusetts. While there, he met his wife, Silvia, in a beginner Russian class.

In 1964, after completing his Ph.D., Birger moved back to Norway, where he held a fellowship with the Norwegian Science Foundation. Silvia travelled to Norway with him, and they were married in Trondheim in 1966. In 1967, they moved to Gothenburg, Sweden, where Birger was a Nordita Fellow at the University of Gothenburg, and where their daughter, Eva, was born. In the summer of 1969, the family moved to Canada, with Birger taking a postdoctoral position at McMaster University, where he worked with Jules Carbotte. Then, in 1972, the family drove to Vancouver, where Birger joined the Department of Physics and Astronomy at the University of British Columbia as an Assistant Professor.

From 1972 until his retirement in 2004, Birger's research sought to clarify fundamental questions in statistical mechanics through the study of simple model systems that were designed to be realistic enough to reveal essential physical principles. His work focused especially on steady-state nonequilibrium phenomena and used computer simulations in combination with analytical methods such as renormalization group and mean-field theories. Birger also pursued interdisciplinary research, and his final project involved a critique of standard economic models that he believed were based on a faulty understanding of thermodynamics and statistical mechanics [2].

Birger had a genuine gift for independent and creative scientific thought, and he passed this on to his many students, encouraging them to follow their interests and scientific passions. He enjoyed wide-ranging conversations with them about science, life, current events, history, and personal experiences, and he often took them on hiking adventures in the local mountains. Birger had a strong desire to see as much of the world as possible, and throughout his career he worked with physicists in Australia, Singapore, and Europe.

With Michael Plischke of Simon Fraser University [3], he co-authored the well-regarded advanced textbook *Equilibrium Statistical Physics*, which appeared in three editions [4]. The first two editions, published in 1988 and 1994, were completed while he was still working at UBC. The third, expanded edition was published in 2006, after his retirement [4]. The family cabin in Tuwanek, near Sechelt, British Columbia, provided an ideal setting for working on his chapters.

Birger was deeply interested in nature and had been fascinated by mushrooms since the age of four. In retirement, he worked on labels and species lists based on many years of data documenting the varieties of mushrooms found near Vancouver. He enjoyed music and theatre, spending time at the cabin on the Sunshine Coast, and travelling with his family to Newfoundland, the Yukon, and Haida Gwaii. He never said no to an adventure or to the chance to see more of Canada.

He was concerned about climate change and consumerism and supported many not-for-profit organizations. He took pleasure in exploring and learning, whether about nature, authors, documentaries, or a new restaurant in the neighbourhood.

Birger's ability to understand complex ideas, his kindness, and his unwaveringly positive outlook on life were valued by the many people whose lives he touched. He will be deeply missed.

Béla Joós, University of Ottawa
Barbara Frisken, Simon Fraser University

References

[1] https://en.wikipedia.org/wiki/Birger_Bergersen.
[2] Birger Bergersen, "Statistical Mechanics of Utility and Equilibrium: Analogies between Economics and Statistical Physics", *Physics in Canada,* Vol. 65, No. 4 p. 205-210 (2009).
[3] Barbara Frisken and Béla Joós, *In Memoriam* Michael Plischke (1945-2020), *Physics in Canada,* Vol. 75, No. 2, p. 54 (2019).
[4] Michael Plischke and Birger Bergersen, "Equilibrium Statistical Physics", Prentice-Hall (New Jersey) 1st ed. 356 pages (1988); World Scientific Publishing Co. 2nd ed. Revised 536 pages (1994); 3rd ed. 640 pages (2006).