



DAVID JENKINS

1935–2021

Elected in 2001

“For theoretical and practical contributions to improving water quality worldwide through applied research on biological waste-water treatment processes.”

BY R. RHODES TRUSSELL AND GEORGE TCHOBANOGLIOUS

DAVID JENKINS, who died March 6, 2021, at age 85, had a brilliant mind, an engaging personality, a passion for humor, and a will to persevere rarely found. He is missed by a broad network of family, friends, and colleagues with whom he actively engaged right up to the last month of his life. The international community of environmental engineers and scientists has lost one of its most respected and beloved advisor-counselors.

David was born in Shropshire, England, on October 4, 1935, to Samuel H. and Olive Jenkins. Samuel Jenkins was himself accomplished in the field of water quality of treatment.

In 1960, at age 24, when David finished his PhD in public health engineering at the University of Durham, King’s College, he emigrated to California to make his way in the world, taking a job with Percy McGauhey (NAE 1973), director of the Sanitary Engineering Research Laboratory in Richmond. It didn’t take long for the faculty at the University of California, Berkeley, to recognize David’s talent, and in 1963 he joined the Department of Civil and Environmental Engineering, where

Readers may also be interested in “A remembrance of Prof David Jenkins (1935–2021)” prepared by the International Water Association’s Specialist Group on Microbial Ecology and Water Engineering; available at <https://iwa-network.org/wp-content/uploads/2021/10/A-Remembrance-of-Prof-David-Jenkins-1935-2021.pdf>.

he remained until his retirement in 1999. He rose to become one of the most highly regarded members of the department, an honorary member of its Academy of Distinguished Alumni, and in 2001 a member of the NAE.

David's major areas of research were biological treatment processes for wastewater and sludge, and water and wastewater chemistry and microbiology. A distinctive feature of his studies was the use of the modern tools of science to find a deeper understanding. In biological treatment, he focused on the causes and controls of activated sludge solids separation problems and the chemical and biological methods of nutrient removal. As a practicing engineer, he specialized in the upgrading and troubleshooting of wastewater treatment plants and in environmental and process problems using his expertise in chemistry and microbiology.

He contributed immensely to understanding of the mechanisms of chemical and biological phosphorus removal in wastewater systems. A few notable accomplishments along his journey of discovery are the identification of geosmin and methylisoborneol, the most recalcitrant causes of off flavors in drinking water; elucidation of the mechanism of solvent diffusion through plastic water pipes; recognition of the importance of mean cell residence time in the management of microbial populations in biological treatment processes; fundamental work on quantification of the many types of filamentous microorganisms in the activated sludge process and other environmental processes, their role in treatment, and their control; and development of methods for controlling *Nocardia* and foaming.

David badly injured his back playing rugby in college and suffered the consequences the rest of his life, although he never let it slow him down. He traveled with a special chair or brace, and many students remember him giving a lecture in the classroom while lying on his back on a chaise. He was beloved for his mentorship of undergraduate and graduate students and postgraduate fellows. He sought ways to nurture and bring out the best in each person he mentored, all of whom became lifelong friends and colleagues.

Throughout his career, he researched and published widely on a variety of environmental engineering topics. He was a great collaborator and interacted with a broad spectrum of the global environmental engineering community. Sought out because he was a problem solver, he generously shared his expertise in microorganism identification in workshops sponsored by a variety of state, national, and international wastewater management organizations, and his expertise in wastewater treatment and management with a number of public agencies, including the County Sanitation District of Los Angeles and the Public Utilities Board of Singapore.

He authored more than 250 publications and reports and coauthored four texts. His book *Water Chemistry* (Wiley, 1991; coauthored with Vern Snoeyink [NAE 1998]) remains popular, and the *Manual on the Causes and Control of Activated Sludge Bulking, Foaming, and Other Solids Separation Problems* (CRC Press, 2003; coauthored with Michael G. Richard and Glen T. Daigger [NAE 2003]) is the bible for activated sludge trouble shooters worldwide.

He was amply honored for his contributions. In addition to his NAE membership, he was designated a fellow of the Chartered Institution of Water Environment and Management in the United Kingdom and an honorary life member of both the Water Environment Federation (WEF) and the International Water Association (IWA). He received the WEF Eddy Wastewater Principles/Processes Medal for research three times (1974, 1985, 1988), the Camp Applied Research Award for contributions to wastewater treatment practice (1984), the Fair Distinguished Engineering Educator Medal for wastewater engineering education (1995), and the Gascoigne Medal for Wastewater Treatment Plant Operations Research twice (1989, 2001). He was selected for three IWA honors: the 1992 Outstanding Service Award (given in honor of Dr. Samuel H. Jenkins), 2001 Ardern-Lockett Award, and 2010 Global Water Award. David also received the 2010 Association of Environmental Engineering and Science Professors Frederick George Pohland Medal for work that bridges theory and practice, and the 1988 Simon Freeze Award and Lectureship, sponsored by ASCE.

David met Joan Van der Velde, who would become his life partner, in 1957 while participating in a musical production together at the University of Durham. In a busy autumn of 1960, they married, honeymooned, David defended his thesis, and they moved to the United States. They were a dynamic duo for over 60 years. Joan hosted countless spaghetti dinners for students and faculty and accompanied David at numerous events over the decades. She is well known and beloved by his vast network of professional friends and associates.

David had the great fortune of living a full and meaningful life exactly as he wished. He is much missed.

He is survived by Joan, their children Daniel Jenkins (Deanne) and Sarah Muren (Mark), six grandchildren, and a growing number of great-grandchildren.

