SENATE RESOLUTION

WHEREAS, The members of the Illinois Senate are saddened to learn of the death of Klaus Schulten, who passed away on October 31, 2016; and

WHEREAS, Klaus Schulten was born on January 12, 1947 in Recklinghausen, Germany; and

WHEREAS, Klaus Schulten earned a degree in physics from the University of Muenster in 1969 and obtained his Ph.D. in chemical physics from Harvard University in 1974; he served as a physics professor at the Technical University of Munich before joining the University of Illinois Department of Physics as a faculty member in 1988; and

WHEREAS, Klaus Schulten led a team of more than 30 students and postdoctoral scientists in the Theoretical and Computational Biophysics Group, which he founded at the Beckman Institute for Advanced Science and Technology in 1989; with a background in chemical physics and a keen understanding of the potential of powerful computers to model biological structures and the physics and chemistry that drives them, he led the development of software that enables scientists around the world to observe how molecules behave and interact at the atomic scale, including the program VMD for the interactive

display, animation, and analysis of large biomolecules, and the large-scale molecular dynamics simulation program NAMD, which accounts for the moment-by-moment chemical interactions of as many as 100 million atoms, with time steps on the order of a millionth of a billionth of a second; he also built a computational microscope that captures the mechanisms of biomolecules in action; and

WHEREAS, Klaus Schulten built his own parallel computer before they were available commercially and was among the first scientists to use the Blue Waters supercomputer at the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign; and

WHEREAS, Klaus Schulten and his group were responsible for fundamental contributions to numerous areas of biology, most recently to understanding photosynthesis, force generation in cells, membrane channel dynamics, and large-scale cellular organization; he and his colleagues revealed the precise chemical structure of the HIV capsid, teased out new details of the dynamic assembly of the ribosome, and contributed to a deeper understanding of the chemistry of odor detection; he also studied the magnetic field effect on migratory birds; and

WHEREAS, Klaus Schulten was a Swanlund Professor of Physics; he served as director for the NIH Center for

Macromolecular Modeling at the Beckman Institute and was co-director of the NSF Center for the Physics of Living Cells; he was also affiliated with the Department of Chemistry and the Center for Biophysics and Computational Biology; he trained over 77 graduate students in physics, biophysics, and chemistry while at the University of Illinois; and

WHEREAS, Klaus Schulten is survived by his wife, Zan Luthey-Schulten; his daughter, Charlotte Schulten (Dr. S. Case Bradford); his brother, Christoph Schulten; and his sister, Karin Balmer; therefore, be it

RESOLVED, BY THE SENATE OF THE NINETY-NINTH GENERAL ASSEMBLY OF THE STATE OF ILLINOIS, that we, along with his family and friends, mourn the passing of Klaus Schulten; and be it further

RESOLVED, That a suitable copy of this resolution be presented to the family of Klaus Schulten as an expression of our sympathy.