Obituary

Jörg Langowski

On May 6, 2017, we lost a dear colleague and friend, biophysicist *Jörg Langowski*, professor at the University of Heidelberg and head of the division of Biophysics of Macromolecules at the German Cancer Research Center (DKFZ) in Heidelberg, Germany. Jörg was an outstanding and innovative scientist, and his work has had wide impact on the fields of DNA and chromatin structure and dynamics. His untimely death at the age of 61 in a glider accident near his home left many of us bereft and in shock, as Jörg was recognized not only for his zeal in pursuit of science but also his remarkable zest for life. He lived his life to the fullest — traveling around the world to work with many scientists and attend scientific meetings, and also to pursue serious sports activities and adventures. Jörg was a marathon runner, an avid skier, and a very experienced airplane glider pilot.

Jörg's work focused on the biophysics and biochemistry of nucleic acid and protein complexes from various experimental, theoretical, and modeling perspectives. His undergraduate and graduate studies were in biochemistry and biophysical chemistry at the University of Hannover with *D. Riesner, G. Maab*, and *A. Pingoud*, including an exchange fellowship by the German National Science Foundation in Stanford with *R. Baldwin*. He pursued postdoctoral work at the University of Washington with *J. M. Schurr*, and had various prestigious positions in EMBL Grenoble before becoming professor and division head at DKFZ. Notably, Jörg was one of the few scientists to address chromatin structure and dynamics from both experimental and modeling points of view. In addition to his work using spectroscopic and neutron scattering methods, he developed a pioneering model to study chromatin structure and folding. Published in 2002 in *Biophysical Journal* (BJ), the paper was titled "Computer Simulation of the 30-Nanometer Chromatin Fiber."

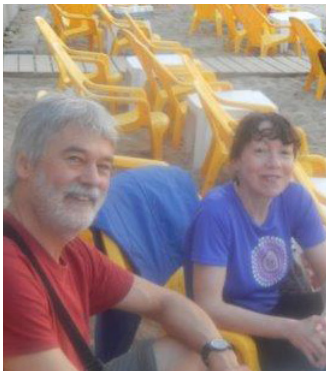
Jörg published around 220 papers with an eclectic group of collaborators, students, and mentors. In BJ alone, he had over 43 publications. These works spanned studies of the structure and internal dynamics of various DNA (such as linear, looped, A-tract, and superhelical DNA), nucleosome, and chromatin systems, using scattering techniques plus a variety of modeling approaches including Brownian dynamics, Monte Carlo sampling, molecular dynamics, and coarse-grained simulations. His very elegant recent work revealed insights into chromatin structure and dynamics as affected by histone tail dynamics, including epigenetic marks, histone depletion, and DNA unwrapping around nucleosomes.

Jörg was a committed member of the Biophysical Society. He served frequently as a reviewer for BJ and attended the BPS meetings annually. At these meetings, he always enjoyed interactions with scientists of all levels and fields, both inside and outside of the presentations. Just a few months ago at the 2017 BPS meeting in New Orleans, Jörg emailed me expressing how much he enjoyed the wonderful jazz music and the local food there with his wife *Kati*. He was a proud and loving husband and father.

Jörg often stopped in New York to visit before the BPS meeting, sometimes staying with former students in New Jersey. He also frequently visited Israel, where he collaborated with scientists at Bar Ilan and Ben Gurion Universities and the Weizmann Institute. When our visits to Israel coincided, we often talked science while enjoying the seaside together. During one of these visits, as seen in the photo, we planned a chromatin meeting which came to fruition in Les Houches, France, less than one month before his accident. There Jörg was the center of the meeting, encouraging and advising the young people, talking with everyone, and arranging skiing activities during the free afternoons and the weekend following the meeting. This meeting's friendly, open, and competition-free ambiance was largely due to Jörg.

— *Tamar Schlick* (schlick@nyu.edu)

A memorial issue of *Biophysical Journal* is being planned, with a December 1, 2017, article submission deadline. We welcome contributions that honor Jörg's dedication to biophysics and frontier research to the subject dear to him — dynamics of DNA complexes and chromatin systems — by innovative experimental and modeling approaches.



Jörg Langowski with Tamar Schlick.