

# Алексей Евгеньевич Лихтман



Alexei Likhtman has died aged 44 after a fall while hiking, was a leading scientist, who showed how computer simulation could be used in imaginative new ways to understand materials of complex molecular structure. An important example is that of flowing melted plastics – here the molecules are giant strings (“polymers”), entangled together and endowing the material with elasticity as well as fluidity. The challenge of identifying the shadowy “entanglements” has been as important to industry as to fundamental science. Alexei’s work showed how to “see” these structures in simulations, in ways that avoided obscuration by irrelevant detail, and produced powerful design tools for industry.

Son of Evgeny Likhtman and Tatiana Bykova, both physicists, Alexei was educated in Moscow. He was awarded a diploma in physics with honors from Moscow State University in 1994, remaining there for his PhD research. In 1998, Alexei took up a position as a research assistant in the department of applied mathematics at Leeds University. In 1999 he moved to the department of physics and astronomy, where he began his seminal work on theories of fast flow of entangled polymer melts. In 2002, Alexei’s research had developed to the point where he was awarded an advanced UK research council (EPSRC) fellowship, which he held until 2005. Alexei worked closely with experimentalists in the UK, Greece and Germany, developing new models of polymer dynamics, flow, neutron scattering

and various spectroscopies. This work has been widely recognized, including with the best paper award of the Journal of Rheology (2006).

Alexei strove to make his science accessible to others, creating a free software tool that enabled scientists in universities and industry to analyze polymer data, greatly accelerating research and its application.

In 2007, Alexei moved to a chair in the department of mathematics and statistics at the University of Reading. There, together with colleagues, he created a globally recognised group of which he was increasingly proud. A truly happy, free-spirited man, full of energy and passion, he had as infectious a love of life as a tireless desire to find scientific truth. He was a great admirer of nature and outdoors, with real care for the world around him. He was a great friend: a funny, spirited, yet always serious person.

Страница Алексея Лихтмана на сайте University of Reading:  
<https://www.reading.ac.uk/math-and-stats/math-alexei.aspx>

Полная версия памятного текста:  
<https://www.theguardian.com/science/2016/jan/07/alexei-likhtman-obituary>

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