1142-14-76   **David Eklund*** (`daek@kth.se`). *The numerical algebraic geometry of bottlenecks.*

I will talk about bottlenecks of algebraic varieties in complex affine space. Bottlenecks are lines which are normal to the variety at two distinct points. I will discuss relations to the data analysis of real varieties and the so-called reach of a smooth variety. I will address the enumerative problem of counting the number of bottlenecks as well as the computational problem of formulating efficient numerical homotopies to compute bottlenecks. (Received August 28, 2018)