Tuesday  
Kenyon College Math Monday Presents…

Analysis of cell movements

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**Abstract**: Identification of cell pathologies is analogous to the physical examination of patients, to diagnose possible etiologic factors behind their pathologies. Behavioral or conformal changes of a cell naturally bear information about the underlying mechanisms that generate such changes. Reading cell motion, that is, understanding these biophysical and mechano-chemical processes is, therefore, of paramount importance. An increase in the motility of tumor cells, for example, may be associated with cancer aggressiveness and metastasis. Our novel mathematical methods are designed, first time in the literature, to translate the abstract theoretical knowledge of cell motion into practical clinical data that can be used for diagnosis, prognosis, and treatment at cellular level.