

C tife Tata Institute of Fundamental Research

Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad - 500107

Internal Webinar

On simulation of complex plastic flows in metal sliding and cutting

A S Vandana

IISc, Bangalore

Until 2012, the origins of complex plastic flows in metal manufacturing processes like metal sliding and cutting at the hundred microns to several mm a source of length-scale were mvsterv and speculation. The advent of in-situ imaging changed the picture and brought to light the microstructural origins of these flows. This had a severe repercussion on the widely used finite element techniques that were used to simulate metal sliding and cutting. This talk will feature what it took to simulate these flows at this length-scale: the issues faced, and the solutions arrived at.

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