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MADALGO seminar by Mihai Pătraşcu, AT&T Labs—Research

Dynamic Lower Bounds

Abstract:

I will survey the state of the art in lower bounds for dynamic data structures in the cell-probe model. This will include a recent (STOC'10) paper in which I describe a plausible attack on $O(n^{\varepsilon})$ lower bounds, and a conditional proof based on 3SUM-hardness. Also, I will talk about recent progress that yields bounds of the form: "if the update time is $o(log\ n\ /loglog\ n)$, the query time must be $O(n^{1-\varepsilon})$."