ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Invitation to a Guest Lecture

Prof. Dr. Günter Rote

Freie Universität Berlin, Deutschland

"Isotonic regression by dynamic programming"

N.2.01 Thursday, 19 September 2019 11:00 a.m.

Abstract

For a given sequence of n numbers, we want to find a monotonically increasing sequence of the same length that best approximates it in the sense of minimizing the weighted sum of absolute values of the differences. A conceptually easy dynamic programming approach leads to an algorithm with running time $O(n \log n)$. While other algorithms with the same running time are known, our algorithm is very simple. The only auxiliary data structure that it requires is a priority queue. The approach extends to other error measures.

Andrei Asinowski and the Department of Mathematics look forward to seeing you at the talk!