## Marginal Analysis on finite collections of finite sets.

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## Abstract

The talk is on Marginal Analysis which was developed to consider various discrete problems involving functions defined on ordered collections of finite sets. These arise in areas such as Hypergraphs and Extremal Set Theory (including Sperner Theory), but there are other areas of application.

The talk begins with an accessible overview of the theory and problems, along with some recent results. Then the theory and methodology of Marginal Analysis is outlined, along with some new applications, and several open problems are mentioned.

At a conceptual level, Marginal Analysis can be viewed as a discrete version of calculus, and this may be of general interest.

Audience participation is invited during the talk.

Some related technical terms include the Kruskal-Katona theorem and function, shadow, antichains, squashed (colex) order.