FINDSTAT: the combinatorial statistic finder

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The online encyclopedia for integer sequences has been a powerful tool which has allowed many mathematicians to discover and share new information about integer sequences.

A combinatorial statistic is a map $\chi : \mathcal{A} \to \mathbb{Z}$ on a set of combinatorial objects $\mathcal{A}$. A simple combinatorial map on the set of permutations, for instance, is the number of inversions of the permutation. Combinatorial statistics occur naturally within many branches of mathematical research. For one reason or another, we independently discover new statistics which give structure to our favorite mathematical objects. Being fans of the online encyclopedia of integer sequences, the authors decided to create a similar database where different experts studying combinatorial statistics could share their discovered combinatorial statistics. This project has been hosted by LaCIM in Montreal, QC and currently exists online at `http://www.findstat.org`.

The only requirement for using Findstat is an internet connection. The page has been built as a wiki, allowing users to add information about their favorite statistics, and allowing anyone to submit new statistics on permutations, partitions, Dyck paths, compositions and standard tableaux.