

The program **FET2xc** implements Fisher's Exact Test in  $2 \times c$  contingency tables making use of a modified network algorithm (see Requena and Martin 2006). Whatever  $2 \times c$  table is analyzed, this algorithm is much more efficient than the network algorithm of Mehta and Patel (1986a), in which it is based. Also this program is much more fast than StatXact-5, in spite of the fact that this statistical package incorporates the Mehta and Patel's (1986b) hybrid method as an additional improvement.

**FET2xc** is valid for any  $2 \times c$  contingency table with  $c$  less than or equal to 200, and the total sum (N) of the table no greater than 20000. The program is written in Visual FORTRAN 6.5, and carries out the calculations in FORTRAN double precision. The output of the program includes the hypergeometric probability of the observed  $2 \times c$  table, the exact  $p$ -value of the test and the computing time.

If  $2 \times c$  contingency table is too big, the fixed memory of the program can be exceeded, and then the program is aborted. In this case you can use the programs **FET2xc\_e** (with a larger fixed memory) or **FET2xc\_i** and **FET2xc\_ie** (which consider the PAST's grouped in intervals in order to reduce both computing time and amount of memory required). Moreover, if RAM memory is not enough, then the hard disk can be used and the computing time can be large. In this case you can use the program **FET2xc\_i**.

#### References:

- Mehta, C. R., Patel, N. R, 1986a. Algorithm 643. FEXACT: A FORTRAN subroutine for Fisher's Exact Test on unordered  $r \times c$  contingency tables. ACM Transactions on Mathematical Software 12, 154-161.
- Mehta, C. R., Patel, N. R, 1986b. A hybrid algorithm for Fisher's Exact Test in unordered  $r \times c$  contingency tables. Comm. Statist. Theory Meth. 15(2), 387-403.
- Requena, F., Martín, N, 2006. A major improvement to the Network Algorithm for Fisher's Exact Test in  $2 \times c$  Contingency Tables. Computational Statistics & Data Analysis, 51, 490-498.
- StatXact-5, 2001. A Statistical Package for Exact Nonparametric Inference. Cytel Software Corporation, Cambridge, MA.