1014-62-1043 **Hugo Maruri-Aguilar** (h.maruri-aguilar@warwick.ac.uk), Gibbett Hill Road, CV47AL Coventry, England, and **Eva Riccomagno*** (Eva.Riccomagno@polito.it), Corso Duca degli Abruzzi, 24, 10129 Torino, IL, Italy. *On the fan of a design and on maximal-fan designs.*

The application of algebraic statistics in experimental design so far can be summarised in few items: 1. the interpretation of a zero-dimensional ideal I as a design; 2. the use of particular types of linear bases of $R[\underline{x}]/I$ to build linear regression models; 3. the normal-form operation to compute confounding structures.

Items 2 and 3 above, and in part 1, depend on the choice of a term-ordering. We investigate its role, usefulness and limitations for the applications in design of experiments. (Received September 27, 2005)