USING MALLOW’S C-STATISTIC WITH SOFTWARE

In arc:
- Run the full model.
- Select “Examine submodels” from the model menu.
- Use the options:
  o “Add to base model (Forward selection)”
  o “Delete from full model (Backward selection)”
- The first option will:
  o Start with the “base model” (specified by user)
  o Fit all submodels obtained by adding just one term to the base model
  o Give $C_1$ for each such submodel
  o Add the term giving lowest $C_1$
  o Repeat with the new model (one additional term) as base model
- The second option will:
  o Start with all terms in the full model
  o Fit all submodels obtained by deleting just one term from the full model
  o Give $C_1$ for each such submodel
  o Drop the term giving the smallest $C_1$
  o Repeat with the new model (one less term)
- Use both options, since each might give some submodels not given by the other.

Other software:
- Varies.
- Features called “Forward selection” and “Backward elimination” might not give $C_1$. (Note: Some software has features with these names that decide to add or delete terms based on F or t-statistics. These are not recommended – see pp. 280-283.)
- Features with other names (e.g., “Best subsets”) might give $C_1$
- You can run a submodel and calculate $C_1$ by hand, but using a built-in feature is more convenient if available, since you get $C_1$ for several submodels at once.