

Using R for the Visualisation of Computer Experiments

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An important aspect of analysing computer experiments (see, for example, Santner et. al. 2003) is the visualisation of results. For example, wireframe or contour plots of the predicted response against two primary inputs can be displayed for various sets of conditioning inputs; or main effect, interaction, or joint effects plots can be displayed.

In this talk, a new R package **VizCompX** that assists in the visualisation of computer experiments is described. The package can be used stand-alone in R, or in conjunction with the Kepler workflow engine (Kepler Core, 2010) via the Nimrod suite of tools (Monash eScience and Grid Engineering Laboratory, 2010) that automates the formulation, running, and collation of the individual experiments.

References

Santner T.J., Williams, B.J., and Notz, William.I. (2003). *The Design and Analysis of Computer Experiments*. Springer: New York.

Monash eScience and Grid Engineering Laboratory (2010). The Nimrod Toolkit., <http://messagelab.monash.edu.au/Nimrod/>.

Kepler Core (2010). Kepler Project, <http://www.kepler-project.org/>.