

Application of econometric and ecology analysis methods in physics software

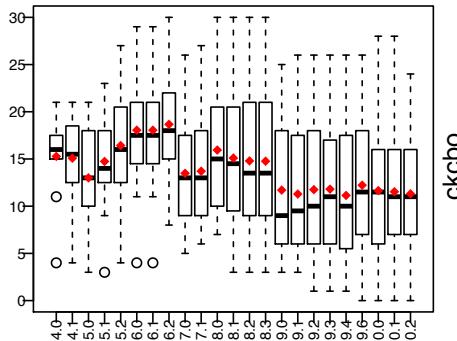
Maria Grazia Pia, INFN Genova, Italy, M. C. Han, G. Hoff, C. H. Kim, S. H. Kim, E. Ronchieri,

Trend
Inequality
Diversity
Concentration
Changepoint
...

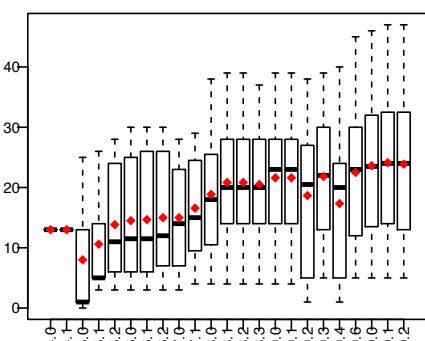
Software quality trend

Trend of coupling between objects over Geant4 evolution

processes/electromagnetic/standard: child



processes/electromagnetic/utils: abstract



Geant4 version

p-value < 0.01

Leaf

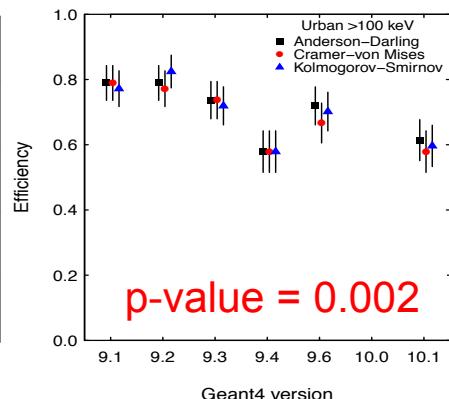
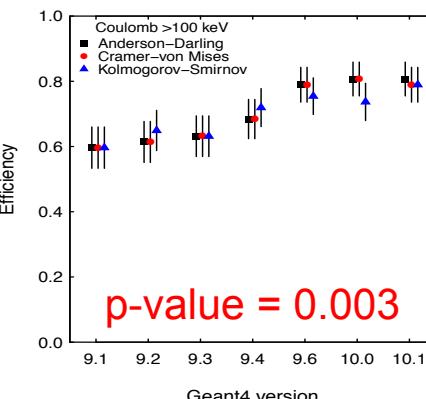
H_1 : downward

H_0 : random

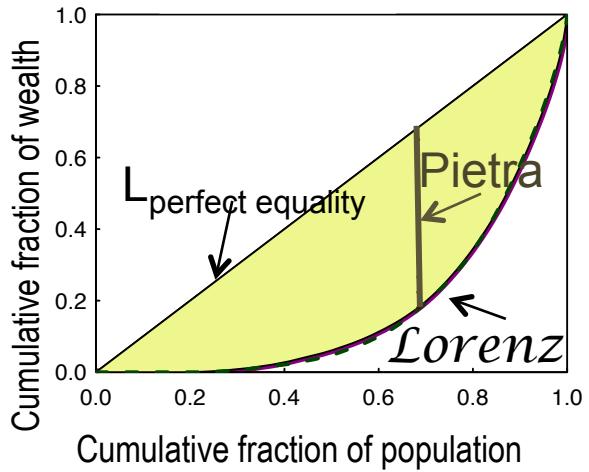
Abstract

H_1 : upward

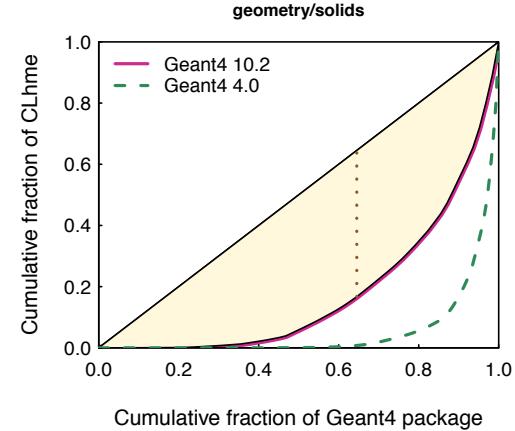
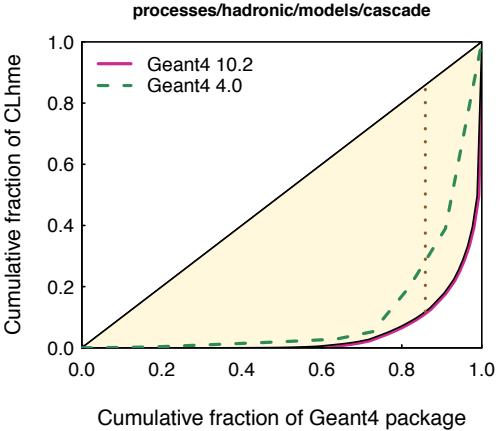
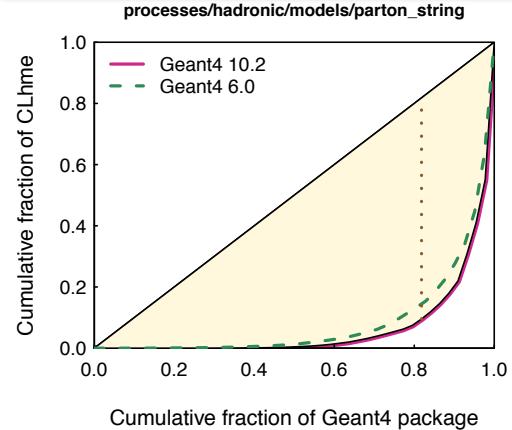
Trend of physics model compatibility with experiment



Inequality measures



concentrated
software complexity



evolution of
concentration

