1116-E5-2625 **Matt Roscoe*** (`matt.roscoe@umontana.edu`) and **David Patterson** (`dapatterson@mso.umt.edu`). *Using R Simulation to Encourage Creativity in an Introductory Probability Course.*

Mathematicians commonly engage in processes that can be described as creative and investigative. Unfortunately, many students do not experience mathematics as such in their coursework. In this session we will describe how instruction in R, a freeware statistical platform, has supported mathematical learning in an introductory probability course by creating opportunities for conventional and non-conventional student activity. Students employ R simulations in the course in conventional ways: using R to verify, estimate and generate probability solutions where analytical methods sometimes fail. Students also employ R simulations in the course in non-conventional ways: investigating probabilistic settings, creating and analyzing probabilistic scenarios, and front-loading analytical methodology with target probabilities. Web resources and examples of student work will be shared. A cost-benefit analysis of instruction in R will also be addressed. (Received September 22, 2015)