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**Deane E. Arganbright\*** (darganbright@dwu.ac.pg), Dept. of Mathematics and Computing Science, P.O. Box 483, Divine Word University, Madang, Papua New Guinea. *Visualization via Excel in Mentoring Mathematics Faculty of a Developing Nation.*

The author is a professor at Divine Word University in Papua New Guinea, a young university in a developing nation, providing assistance in the start-up of its new mathematics department. Because the country has a shortage of mathematicians with advanced mathematics degrees, it is essential to enhance the mathematical backgrounds of the junior-level academic staff, many of whom often possess only a first degree with limited theoretical content. The enhancement includes developing instructional skills that teachers need in order to be effective tutors in courses such as calculus, linear algebra, and statistics, as well as helping them to increase their backgrounds in theory. This material studied includes topics from the upper undergraduate level. The program is carried out by senior academic staff members who serve as mentors for the younger staff. This presentation describes and illustrates a novel way of using a spreadsheet to create effective visualizations of many theoretical aspects of calculus that in turn provide a way to develop insights into definitions, theorems, and proofs. In the process, the younger teachers also acquire experience in using a tool that they can employ for creating their own useful classroom visualization demonstrations. (Received September 02, 2009)