

**ZMATH 2015d.00954**

**Tay, Kim Gaik; Kek, Sie Long; Abdul-Kahar, Rosmila**

**A bivariate approximation spreadsheet calculator by Lagrange interpolation.**

Spreadsheets Educ. 7, No. 1, 8 p., electronic only (2014).

Summary: Even though interpolating bivariate data by Lagrange interpolation is straightforward, its repetitive calculations are quite boring and complicated if the number of data is large. Hence, there is a need to have a suitable tool in teaching and learning numerical methods for this topic. To simplify things, we have developed an Excel spreadsheet calculator to interpolate the bivariate data with 4 rows by 4 columns using Lagrange interpolation. The spreadsheet calculator can be used by educators and students who need its full solution. In addition, users only need to enter a dataset, two independent variables, and the values of the two independent variables which are not in the dataset to obtain a bivariate approximation solutions table in the respective target cells automatically. Besides, the Excel commands given help in the teaching and learning process of this topic using Excel spreadsheet.

*Classification:* N55 U75

*Keywords:* bivariate approximation; spreadsheets; Lagrange interpolation; numerical analysis; interpolating polynomials

<http://epublications.bond.edu.au/ejsie/vol7/iss1/2/>