Kevin M. Reynolds

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EDUCATION

Southern Illinois University – 2005
Bachelor of Science in Mathematical Studies

- Coursework included analysis, numerical theory, statistics and programming.

- **Singular Value Decomposition -** Decomposing a matrix into two orthogonal matrices, one being a change of basis in the domain and the other a change of basis for the range such that the matrix becomes diagonal. As an example the method was applied to image compression using MATLAB.

Southern Illinois University – 2007
Master of Science in Applied Mathematics

- Coursework included analysis, numerical theory, differential systems and statistics.

- **A Look Into the Preconditioned Conjugate Gradient Method -** Looking at the method by minimizing a functional and as a Krylov subspace technique. First deriving the general properties of Krylov techniques and then applying them to generating the Conjugate Gradient Method. The general theory of Preconditioning was discussed and then applied to the Conjugate Gradient Method and, using MATLAB, was applied to approximate the solution of the Poisson equation, an elliptical partial differential equation.

OCCUPATION

Teacher's Assistant - Southern Illinois University 2005 - 2007

- Algebra and Calculus 1 and 3 Labs.

Adjunct Instructor - Southern Illinois University 2007

- Calculus, Pre-Calculus, and Algebra.

Adjunct Instructor - Southwestern Illinois college 2007 - 2012

- Review of Arithmetic, Basic Algebra, Intermediate Algebra, Statistics and Business Calculus.

Adjunct Instructor - St. Louis Community College 2011 – 2012

- Intro to Algebra and Basic Mathematics.

Lecturer – Coastal Carolina University 2012 – Present

- College Algebra, Trigonometry, Calculus for Bus & Soc Science, Precalculus, Basic Concepts of Contemp Math, Calculus 1, and Calculus 2.

SKILLS

- PowerPoint, Latex, and video presentations tailored for specific courses.
- Creating problem sets designed to encourage students to work together to discuss problems as well as aid in study beyond the textbook.
- Setting up online discussion boards for student peer responses and for additional help from the instructor.
- Developed and used multiple C.A.T's for assessments, public response and discussion, and to encourage group "comfort" to aid in peer discussion.

PROFICIENCES

MATLAB, C++, Mathematica, TI-83, 89 & voyager (including programming), Latex, Microsoft: Word, Excel, PowerPoint