

Meeting: 1003, Atlanta, Georgia, MAA CP X1

1003-X1-1092 **Elizabeth C Rogers*** (brogers@piedmont.edu), P.O. Box 907311, Gainesville, GA 30501.

Impact of Islamic mathematics on the European Renaissance.

Islamic scholars preserved the mathematics of the Classical Period, but more importantly they generated new ideas and laid the foundations of what would become the European Renaissance. Many modern Scholars believe today's mathematics is closer in style to the Arabic than to the concepts of the Greeks. While the intellectual community in Europe was suppressed during the Dark Ages, the Muslim Empire was going through its Golden Age of intellectual growth. The Caliphs encouraged advancements in intellectual growth and brought together intellectuals from across the empire to form the House of Wisdom in Baghdad. There was a concerted effort to gather manuscripts from earlier civilizations, translate them into Arabic and build on those discoveries. The Islamic civilization became a bridge connecting the knowledge of ancient Greece, Rome, India and pre-Islamic Iran to Europe and forming the foundation for the Renaissance. Al-Khwarizmi developed the concept of mathematical algorithms to describe a systematic and logical approach for solving linear and quadratic equations. His successors applied algebraic methods to traditional geometrical problems and then began to replace geometrical operations with arithmetical operations that make up the core of modern-day algebra. (Received October 03, 2004)