

1023-01-944

J. Lennart Berggren* (berggren@sfu.ca), Department of Mathematics, Simon Fraser University, 8888 University Drive, Burnaby, B.C. V5A 1S6, Canada. *Geometry and Islamic Art in Tenth-Century Baghdad*.

The talk will present an overview of the contents and some of the beautiful geometrical constructions found in Abu al-Wafa al-Buzjani's *Essentials of Geometrical Constructions for the Artisan*. The work contains, among other matters, constructions with the so-called rusty compass, methods for inscribing one regular polygon in another, and dissection techniques for polygons. The methods lead to the kind of beautiful geometric designs that one finds in Islamic tilings of the period. We shall set al-Buzjani's techniques in the historical context both of some of the ancient Greek constructions and geometric activity in and around Baghdad in al-Buzjani's time. (Received September 23, 2006)