

- 4) El-Shazly, A., “The Delaunay Diagram of Roundabout Cairo since 1867,” *Proceedings of the International Conference on Green Buildings, Civil and Architecture Engineering, Universal Researchers in Civil and Architecture Engineering (URCAE – London, UK)*, Dubai, 25-26 December 2015, pp.104-110. ISBN 978-93-84422-50-9

The graph of Delaunay Diagram integrates the geometrical measures with syntactic and algorithmic properties to determine the spatial structure of Haussmannized Cairo in 1867 for conservation. The essence of dense circumcircle property stretches from ‘Tahrir’ to ‘Ezbekia Garden’ with boulevard projection towards Cairo monuments such as the Pyramids. Larger circumcircles span Cairo in overlap between the old and new towns. The circumcircle structure ties with the various geometrics in dynamic clustering of interval values that zone-up or scatter over the point pattern distribution. The extreme interval ranges correlate with the two poles of the ‘Citadel’ and ‘Cairo Station’ in contrast to the central corridor. Meanwhile, the major public facilities and the royal palaces optimize the spatial integrity and control of the Delaunay structure, with the traversable property of graph vertices in maximal matching between the graph degree and radial boulevards. The absolute correlation with the Delaunay dimensions observes ‘Tahrir’ morphology of intermediary regenerative structure.