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**So Min Lee\***, Choice Research Group, NJ, **Jaeyun Choi**, Choice Research Group, NJ , and **Daniel Sung**, Choice Research Group, NJ. *An Alternative Method for Space Filling Using Domain Transformation.*

Many combinatorial mathematicians have studied on the patterns of SFCs(Space Filling Curves). A complex process made by the mathematicians need to be analyzed to simplify the procedure recursively converting each points on 1 dimensional domain to coordinate values on 2 dimensional domain. Thereafter, recursive smaller version of the original open square on 2 dimensional domain can fill out the whole square. In this research project, using a simplified algorithm, we created subintervals that can be mapped continuously onto the sub-squares using mathematical and computational analysis. Compared to the building blocks by the existing SFC method, such as Peano and Hilbert curve, present research illustrated histogram analysis and graphical data showing that filling open square using present method can be efficient in computer running time. (Received August 20, 2019)