**Poster Presentation**

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## *Color Symmetry of Certain Tilings with a Singular Center*

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Tilings with singular points, or tilings that are not locally finite, are classified in [1] among tilings that are not "well-behaved". In [2], colorings of tilings with a singular center were obtained from certain colorings of regular Euclidean tilings. It was observed that not all such colorings could be transformed into colorings of tilings with a singularity. Moreover, the existence of maximum color indexes was surmised. In this paper, we provide a mathematical basis for the said observations by utilizing conformal maps that distort a regular Euclidean tiling into a tiling with a singular center. That is, we determine conditions so that a coloring of a regular Euclidean tiling can be transformed into a coloring of a tiling with a singular center. In addition, we establish that a maximum number of colors exists. Finally, we give conditions so that the symmetry group of the tiling with a singular center induces a permutation of the colors.

***[1]*** *B. Grünbaum, G.C. Shephard, Tilings and Patterns (McGraw-Hill), 1952, p 113-164,* ***[2]*** *R. Lück, Color Groups in Tilings with Singularities, Aperiodic '09 J. Physics: Conf. Ser. 226, 012027 (2010)*

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