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## Fibonacci Geometry is Fashionable

## Kazlacheva Z\*

Faculty of Technics and Technologies, Trakia University, Graf Ignatiev 38, 8600 Yambol, Bulgari

The Fibonacci numbers are the sequence of numbers  $\{F_n\}_{n=1}^\infty$  defined by the linear recurrence equation

$$F_{n=}F_{n-1} + F_{n-2} \tag{1}$$

With  $F_i = F_2 = 1$ . As a result of the definition (1), it is conventional to define  $F_o = 0$ .

The Fibonacci numbers for n = 1, 2, ... are 1, 1, 2, 3, 5, 8, 13, 21, ... [2]

Fibonacci sequence is used in the creation of geometric objects. There are some versions of Fibonacci series tilings, which are constructed with equilateral geometrical figures – squares or triangles, as the sides' lengths are equal to the numbers of the Fibonacci series, or the lengths of the sides of the squares or equilateral triangles are each to other in proportions, which are equal to Fibonacci sequence.

Fibonacci tilings can be used directly in fashion design.

Figure 1 presents a model of a lady's dress which is designed with the use of the one of the both versions of Fibonacci tilings with squares. In this version the block is circled finding the next side and a spiral pattern is formed [1]. Figure 2 presents a model of a lady's dress which is designed on the base of the second version of Fibonacci tilings with squares in which two squares are put side by side, another square is added to the longest side and that is repeated by the putting of the next square [1]. The first of both Fibonacci tilings with squares is used as a frame for creation of Fibonacci spiral and in the fashion design Fibonacci spiral can be used in with,





like the dress model in Figure 3, or without the frame of the tiling with squares.

There is a version of Fibonacci series tiling with triangles. This version uses equilateral triangles to form a double-spiral [1-3]. The Fibonacci tiling with triangles, called 'Fibonacci rose', is directly used in the design of a lady's dress, which is shown in Figures 4 and 5 presents a model of a lady's dress with design on the base of Fibonacci rose, but with added double spiral, created around the frame of the tiling with triangles. Figure 6 shows a model of a dress with double spiral, which is formed by circles. These circles are formed using the Fibonacci rose as a frame. Circles are entered in the triangles from Fibonacci tiling and in this case the model is designed without the tiling frame.

As a result of the use of Fibonacci series tilings with squares and triangles for designing of aesthetic, beautiful and harmonic clothing, it

\*Corresponding author: Kazlacheva Z, Faculty of Technics and Technologies, Trakia University, Graf Ignatiev 38, 8600 Yambol, Bulgaria, Tel: +359 46 990338; E-mail: zlatinka.kazlacheva@trakia-uni.bg

Received July 09, 2014; Accepted July11, 2014; Published July 21, 2014

Citation: Kazlacheva Z (2014) Fibonacci Geometry is Fashionable. J Textile Sci Eng 4: e122. doi:10.4172/2165-8064.1000e122

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2.

3.

Resource

Resource.

can be concluded that in fashion design Fibonacci tilings can be used in different position, combinations, proportions toward the clothing sizes, and color decisions.

And they can be used directly and as frames for creations of other geometric forms with or without using of the frames in the final design.

Fibonacci geometry is fashionable!

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