

# Applying Moire Fringes to Clothing Pattern Design

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## Introduction

Recently, the desire for people to express the creative sense through the clothes became intense. Apparel companies have increased their interests in developing new types of textiles to overcome the limits of style and silhouette. And these days are referred to as 'the times of textile fashion,' owing to the emphasis on textile design in fashion companies<sup>1)</sup>.

As a result, they began to pay more attention to the ultra-fashion of textile, new way of process and design development. Also, there appears to be a new tendency to use exotic textiles and new ways of processing, which were considered old-fashioned in the past. Moreover, the new textiles are popular among consumers because they are unique and peculiar.

So far, Moire patterns have been used to measure the structure of a body or a subject in the areas such as physics, medical science, and the precision industry. But We have used the merits of this pattern as a new way of creating fashionable patterns. In this study We have designed the clothes using Moire fringes which resulted from overlapping a few kinds of gratings, based on the results of previous study<sup>2-7)</sup>.

## Research Methods And Procedures

We have overlapped square grating with radial grating, transformed square grating with radial grating, and transformed square grating with applied parallel line grating. And We have applied them to the design and the results are as follows:

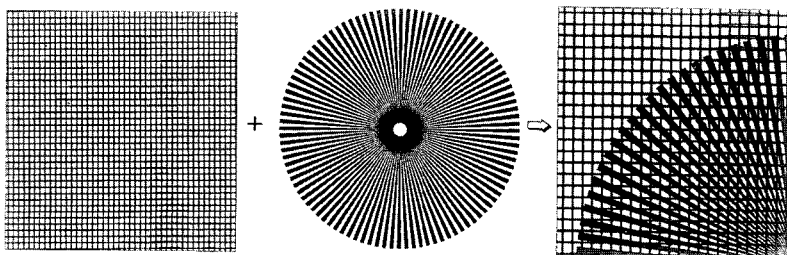


Fig. 1. Moire fringes resulted from overlapping square grating with radial grating.

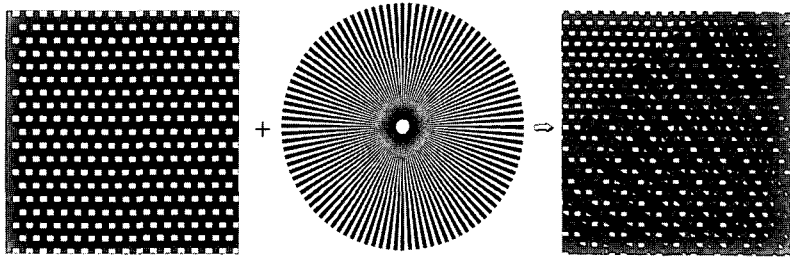


Fig. 2. Moire fringes resulted from overlapping transformed square grating with radial grating



Fig. 3. Moire fringes resulted from overlapping transformed square grating with applied parallel line grating

## Results

We used the black square grating as a ground, and printed various Moire fringes such as Fig. 1, Fig. 2, and Fig. 3 on round-shaped films which were used as the patterns. Then We fixed the printed round-shaped films with threads to move just the upper parts. We placed harmoniously these three Moire fringes on the dress. Especially, We placed more Moire fringes on the bottom of the dress to gain its balance. Furthermore, the parts in which the round-shaped patterns were overlapped produced another Moire fringes. Whenever a person wearing the dress moves, we can see new kind of Moire fringes because the location and angle of the square grating and the round-shaped film change.

## Conclusion

We chose the patterns which were considered effective when We used some Moire fringes on the clothes design and applied them to the clothes design after making the round-shaped patterns. The characteristics of Moire fringes are that we have different kind of Moire fringes by overlapping two more textiles, and that we have another new patterns when the location of outside textiles, which are overlapped with the inside textiles, changes as a person wearing the dress moves. We hope the study on the kinds of the gratings producing more Moire fringes, and on the clothes textiles and items effectively showing Moire patterns lasts. And also We hope Moire fringes are widely spread and used in the area of clothes textiles.

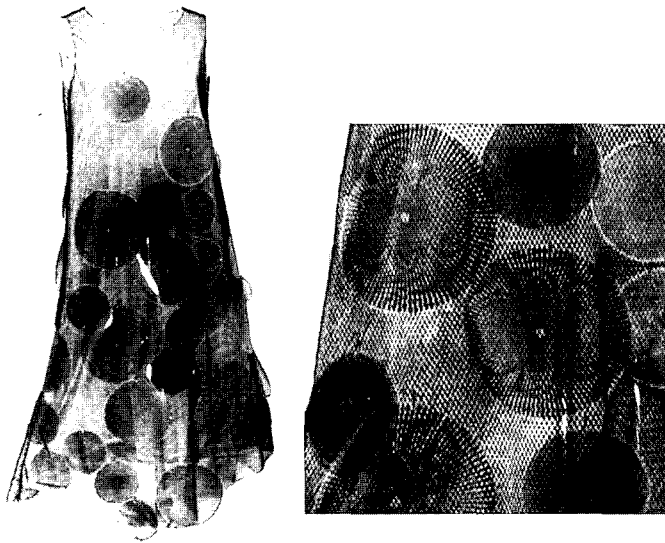


Fig. 4. One-piece dress using Moire fringes

## References

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