

LACE GETAWAY 2016 - TESSELACE TALK AND WORKSHOP

by Veronika Irvine

LOOKING BACK

Bobbin lace has a rich tradition of delicate patterns called grounds or fillings. In *Viele Gute Gründe*, Ulrike Löhr carefully documents patterns dating back to the 1700s which she has found in lace collections such as the Victoria and Albert Museum in London and the Gruuthusemuseum in Brugge. Uta Ulrich has provided a very practical collection of traditional grounds in her book *Gründe mit System* as have Bridget Cook and Geraldine Stott in *The Book of Bobbin Lace Stitches*. But what about modern designs? Have we discovered all that there is to know about lace grounds? Indeed not! The 2013 book *Moderne Gründe*, edited by Sabine Pichl of the Deutscher Klöpplerverband e. V., gives a very clear picture of the techniques used by several contemporary lacemakers to invent new lace grounds with a modern aesthetic. These techniques primarily involve modifying traditional grounds either by changing the cross and twist combinations, bending and reshaping the grid, moving pin holes or using threads of different thickness or colour. This has opened up a new area of lace design which I would compare to the Color Field movement of abstract expressionist painters: these interesting little ground patterns are moving out of their traditional supporting role and taking center stage.

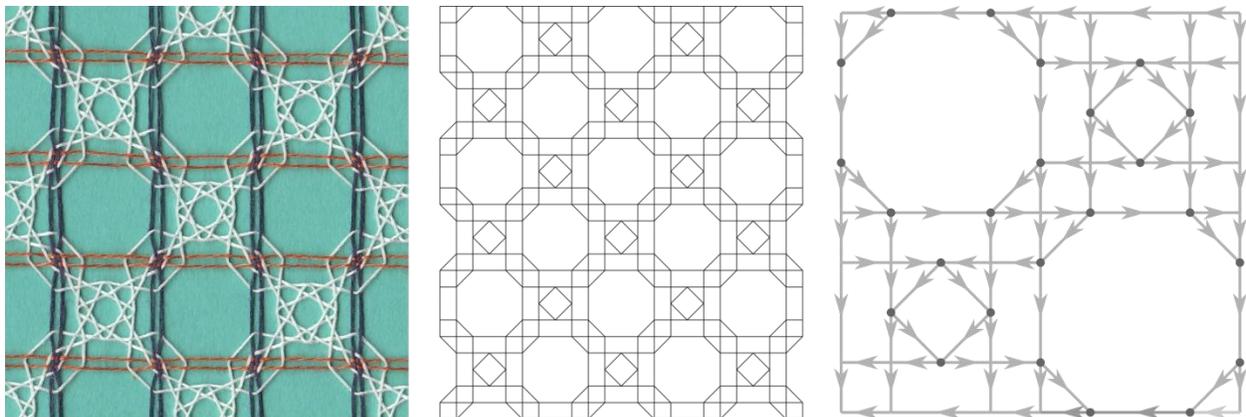


Figure 1: A TesseLace pattern discovered using a computer algorithm.

LOOKING FORWARD

We have come a long way and have many beautiful lace designs but I feel that there is still room for discovery – the potential of what can be done by braiding threads has not been exhausted. For the most part, over the past 500 years the evolution of bobbin lace grounds has relied on extensive hands-on experience combined with trial and error – a process that is time consuming and achievable only by a few experts. In the modern age, however, we have the benefit of computers

which are extremely good at performing repetitive tasks with tireless precision – they just need to be given explicit instructions. With this in mind, I created a mathematical model that uses some basic principles of bobbin lace design to define rules that can be understood by a computer. I then wrote a computer program that can systematically search for lace patterns by applying these rules. It is a bit like putting together a jigsaw puzzle by trying every single piece to see if it will fit in the available space and then doing it all over again for the next open space – repeating until the puzzle is finished. Fortunately, the computer does not find this boring! Using this approach, I have been able to find over 100,000 bobbin lace grounds and this is just the tip of the iceberg. It is very possible that there are an infinite number of unique patterns, some with styles that we have never even dreamed of.

INTRODUCING TESSELACE: ALGORITHMICALLY DESIGNED LACE TESSELLATIONS

In 2015, I invited Lenka Suchanek to attend a talk I was giving about my research to undergraduate students in the math department at Simon Fraser University. I was hoping that she would find the idea interesting and not too academic. Her interest went well beyond my expectations. Lenka has been avid supporter. Not only has she incorporated one of my patterns into her wood and wire sculpture called “Waves – Offering to the moon”, she has also helped me to see the potential direction this new exploration could take us.

Somehow referring to these new patterns as grounds or fillings seems to diminish their significance. I wanted to raise the importance of these repeated patterns and shine a light on them. To that end, I have started calling them *lace tessellations* or, as Lenka has named them, *TesseLace* – derived from the Czech translation of “tessellation” which is “teselace”. Tessellation is a mathematical term used to describe a tile that fits perfectly together with other identical tiles to cover a floor or to fill in any shape without gaps or overlaps.

TALK AND WORKSHOP OVERVIEW

At the 2016 Lace Getaway hosted by the Denman and District Lace Club, Lenka and I will be giving a talk about TesseLace followed by a workshop.

Talk: Veronika will explain how the TesseLace patterns were created and how lacemakers can get started designing with them. Lenka will describe her experience working with the patterns and discuss the potential of how they can be used.

Workshop: After learning about the background of TesseLace and how to design with lace tessellations, participants will have the opportunity to try them first hand. They can choose to make the patterns with thread or wire. An example pattern is shown in Figure 1.

We look forward to seeing you at the Getaway. For more information about lace tessellations, please visit TesseLace.com.

All the best for 2016,

Veronika Irvine

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2016 LACE GETAWAY:

The 2016 Lace Getaway will be hosted by the Denman and District Lace Club in Courtenay BC from Monday April 4 to Wednesday April 6. The cost for the 3 days is \$45. If you want to attend for the Monday or Tuesday, the cost is \$20 per day, for the Wednesday, which will include a catered lunch, the cost is \$25 for the day.

To register, please respond to this email address and mail a cheque, made payable to Denman and District Lace Club, 301 Alpine St., Comox, BC V9M 1G1.

The Getaway will be held at the Bill Moore Park Lawn Bowling Building, which is located on the corner of Kilpatrick and 23rd, in Courtenay. I have attached two maps to help you located the building. Please study the map because Kilpatrick break off into 3 locations. I have also included the location of 4 hotels that you may want to stay at, all of which are located on Cliffe Ave.

Travel Lodge 250-334-3391

Holiday Inn Express 778-225-0010

Anco Motel 250-334-2451

Best WesternPlus The Westerly Hotel 250-338-7741

During the Getaway, Veronika Irvine and Lenka Suchenek will be giving a talk and workshop on TesseLace. Attached is a letter from Veronika with an introduction to TesseLace. Further instructions on what to bring for the workshop will be sent to you before the Getaway.

Looking forward to seeing you at the Getaway.

Ruby Osborne

Denman and District Lace Club

250-890-0125