

# Overview of TTP-2

## Suzi Park



coleg**sir**gâr



# Shared Technology Resource Centre STRC

- Been running since 2001, various Government and other funded projects
- Work with Sector Skills Councils, INTERREG, Welsh Government
- Currently three projects running in the centre:
  - Foundation Degree in Textile Technologies
  - Apprenticeship pilot in Fashion and Textiles
  - Textiles Technologies Project -2

# Textiles Technologies Project-2

Continuation of Welsh Government A4B funding Academia to Business  
Building upon the last project, we will be carrying working with businesses in:

- Research and Development Projects
- Collaborative Industrial Research
  - Knowledge Transfer activities
- Networking, seminars & dissemination

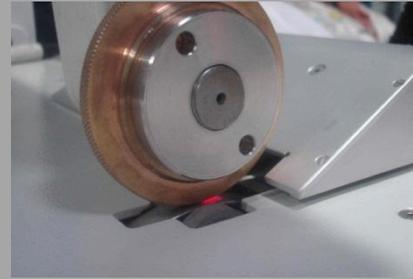
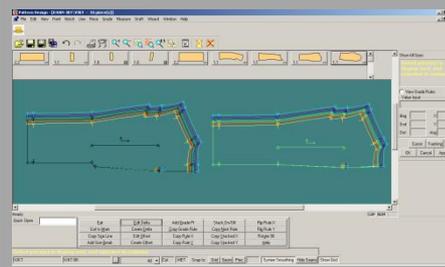
Additionally we will be providing

- Commercial Services

# Resources

We will build on existing resources in the centre

- Gerber - pattern digitisation and grading
- Virtual sampling - for print simulation
- Prototyping
- Laser & ultrasonic textile joining
- CAD design and development print & weave
- Laser cutting (Swansea Metropolitan University)
- Digital printing (SMU)



source: TWI fibre join tests for artificial vascular tubing

water cutting  
technology



laser cutting and  
engraving  
technology



digital fabric printing

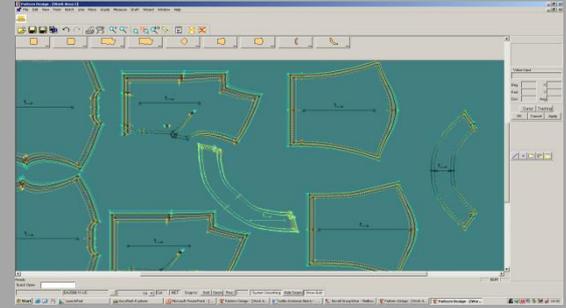
# CAD development



courtesy Laura Thomas



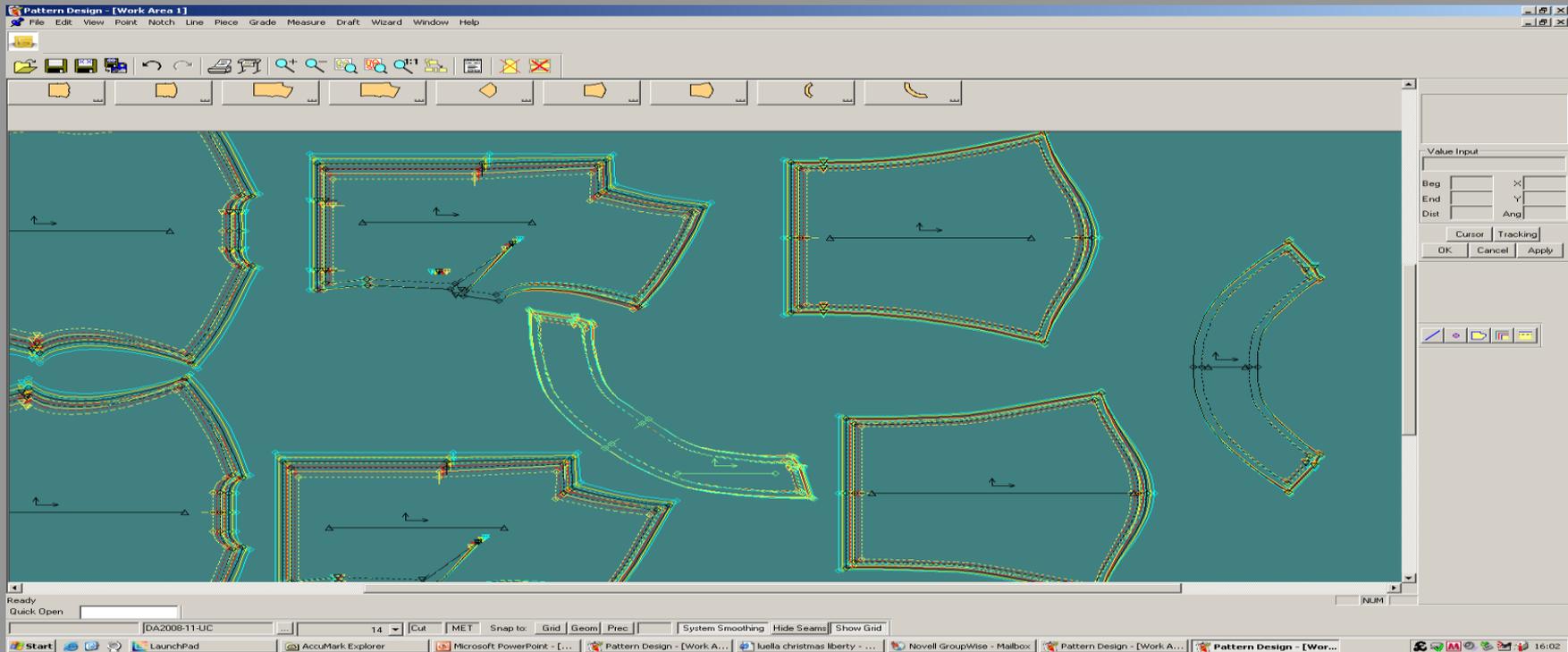
courtesy Danielle Carter



Gerber software

Scotweave software

AVA software



Gerber : computerised grading

Microsoft Excel - DUFFLEWEAR [1] (spreadsheet)

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**TOAST**

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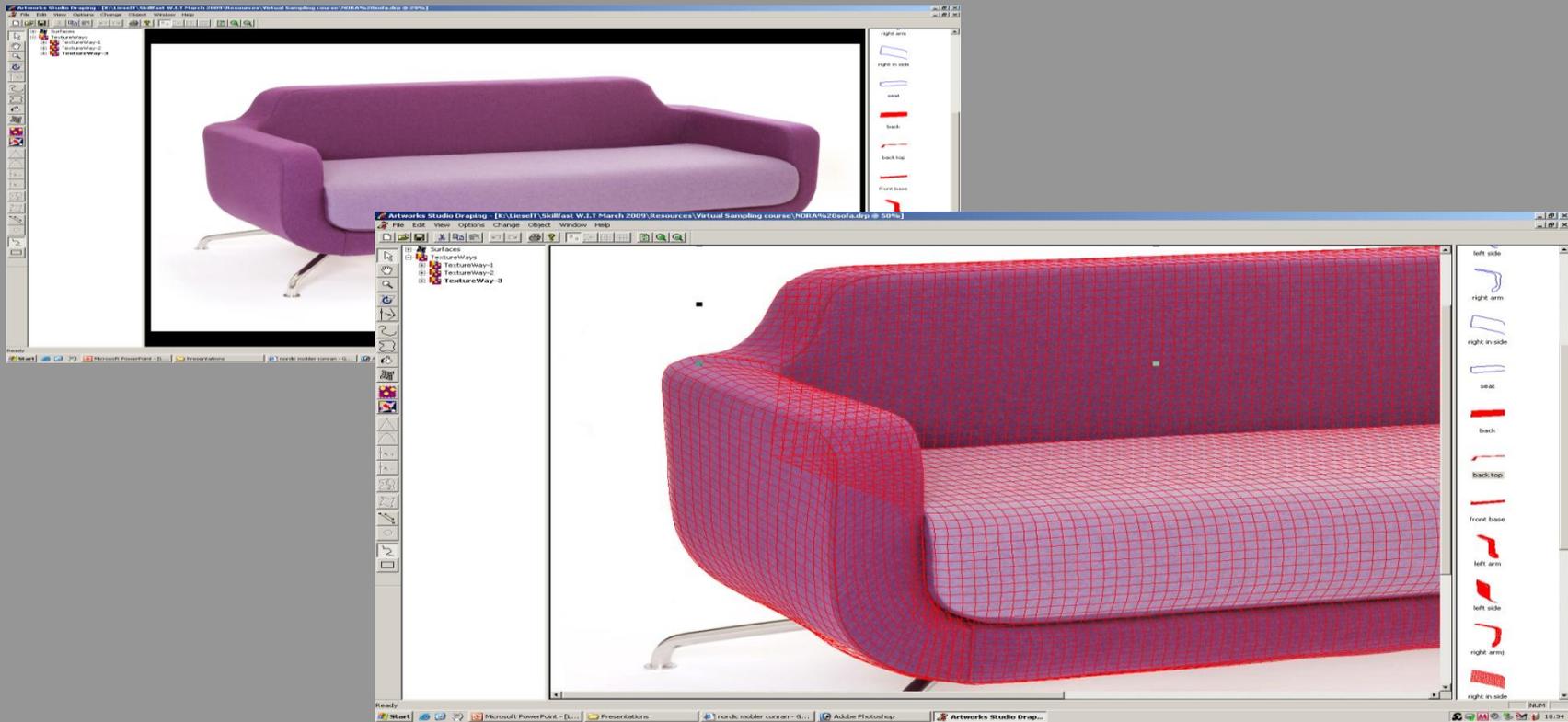
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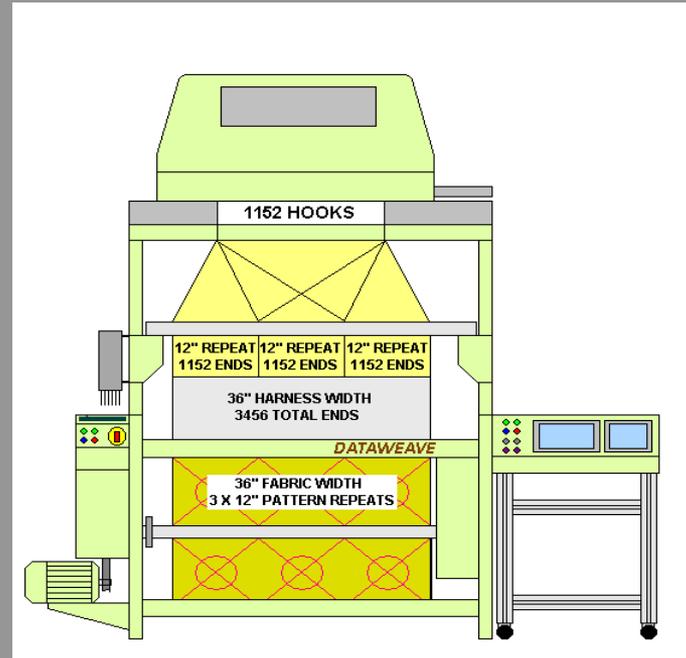


## Virtual sampling



# DATAWEAVE Jacquard Loom

- 36" Weaving width
- Maximum total ends 3456
- 8 Weft selectors
- Warp let off and fabric take up units are electronically controlled and have the ability to be adapted for more technical fabrics



# What are the advantages of using jacquard looms over dobby looms?

- The ability to use more complex weave structures
- The ability to use larger repeat sizes
- The ability to use more colours
- Fabrics created on a dobby loom can also be created on a jacquard loom

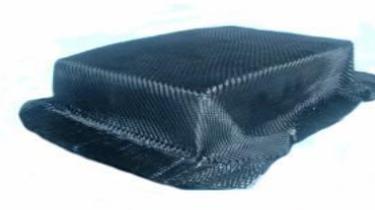


Rothschild Bank HQ – Textile depicting a landscape from a 1864 map of  
Gunnensbury Park

# Technical textiles - 3D weaving and woven composites

Areas where innovative jacquard weaving and 3D weaving have been used:

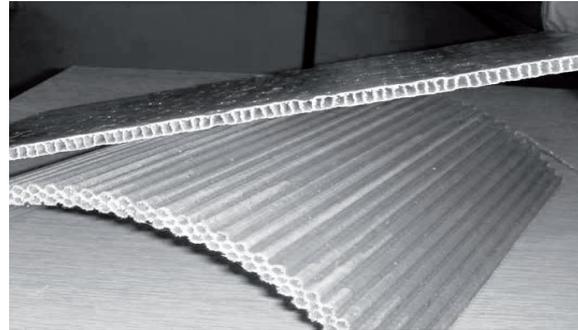
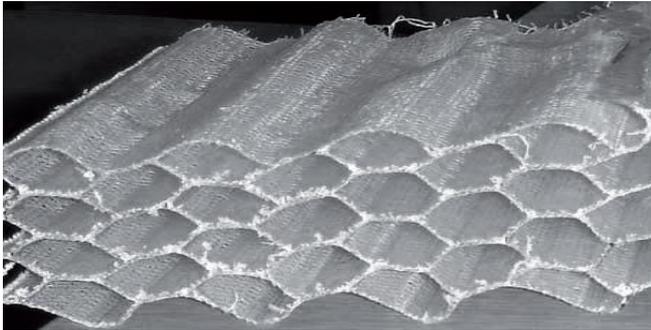
- Construction
- Military
- Protective clothing
- Medical
- Automotive
- Aerospace



*Shape Weaving by 3 Innovative Textiltechnik GmbH.*

## Advantages of using woven fabrics in performs and composite materials

- Cost effective as it cuts the need for additional production methods in joining and cutting
- Produces lightweight materials that replace heavy metal components



# What can the TTP-2 do for your business?

- Research & Development through the A4B project either collaborative or paid services. IP development, licencing etc.
- Use of the centres facilities and staff on a commercial basis only.
- CAD development, prototyping, use of all equipment and facilities
- Bespoke training, 'Hot Desk-ing'
- Woven fabric design development, sampling
- Print CAD work, digital sampling
- Gerber digitizing
- Laser etching and joining, ultrasonic joining

# ICE PROJECT

Innovation, Collaboration, Education

- The ICE programme is being delivered by dedicated staff within the Business Development Unit at Coleg Sir Gar. The programme will look to develop networks in construction, ICT, food, creative industries, manufacturing, automotive and engineering
- Through ICE there will be a single customer facing approach to manage all aspects of industrial engagement at CSG. The overall project management of all A4B projects is the responsibility of ICE.
- Our focus is to develop sector networks between regional businesses, funding providers and the college's business development services.
- The aim is to provide support and business development opportunities available through funding calls from national funding bodies, TSB (Technology Strategy Board) and the Welsh Government's Innovation initiatives.

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Juliette Mackenzie: Administration support TTP-2

Karen Morris: Project Manager ICE

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