

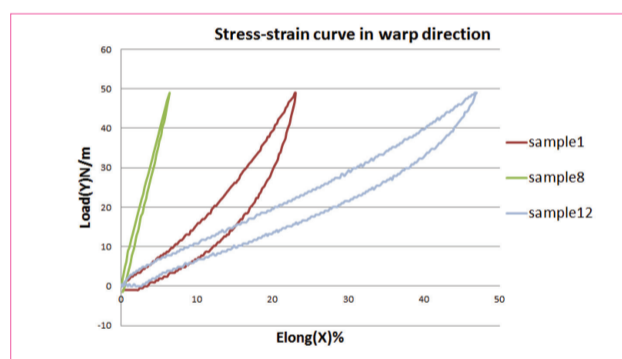
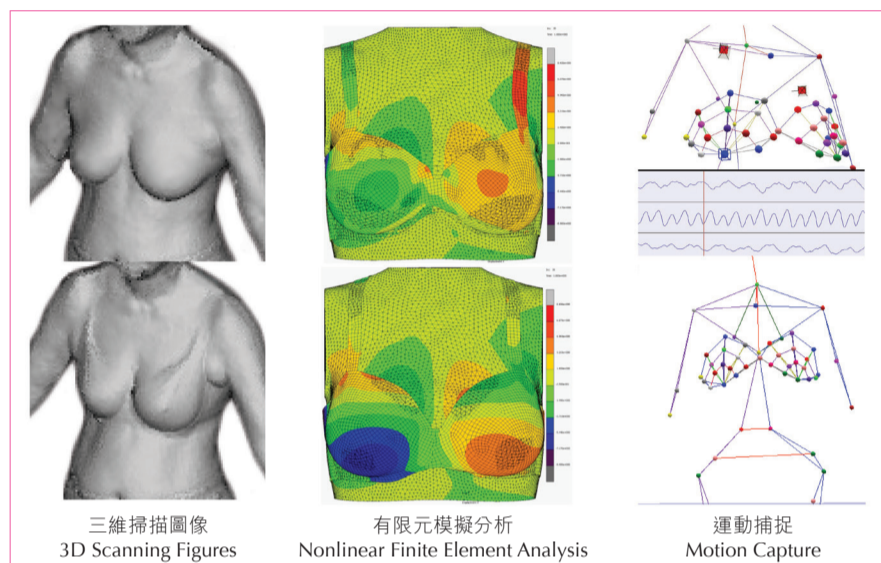
基於生物力學設計的逆齡胸圍系列

Age-friendly Bra Series with Biomechanical Design

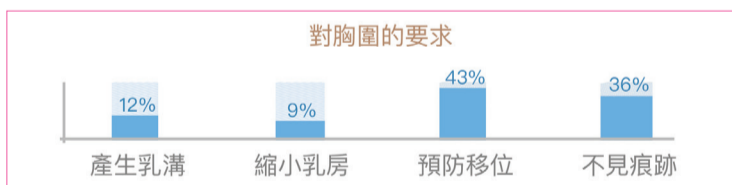
根據年長女仕身體特質設計的逆齡功能胸圍

A collection of functional bras specially designed for older women's body

隨著年齡增長，女士們的乳房會逐漸下垂，她們可能難以把手臂伸向背後扣緊胸圍，同時還會討厭胸圍鋼圈帶來的壓力。本研究分析年長女仕在不同社交活動時穿戴胸圍的取向及需要，為她們解決目前胸圍的問題及滿足她們的需求。研究團隊採用非線性計算模型，模擬高彈性胸圍材料施加於皮膚的三維壓力分佈，並根據實驗和試穿測試的數據，設計出一系列應用生物力學、美觀而實用的逆齡胸圍，為胸圍設計帶來新方向和新指標。



拉伸應力應變圖
Stress-strain Curve in Warp Direction



訪問84名年屆 50歲或以上的中國內地和香港年長女仕，關於她們在不同社交活動穿戴胸圍的取向及意見
A survey with 84 older women aged 50 or above in the mainland China and Hong Kong, about hobbies and needs of wearing bra in different social activities

Ageing women tend to be troubled by sagging breasts and difficulties to turn their arms and fasten the bra at the back. They may also find pressure of the bra wires against the body unbearable. This project analyzed older women's habits and needs about bra wearing when participating in different social activities, thereby providing solutions to current problems and fulfilling their requirements.

The team adopted nonlinear finite element modelling to simulate the 3D distribution of pressure exerted by hyperelastic textile materials to the skin. In reference to testing and wear trial results, a collection of fashionable and functional age-friendly bras have been designed based on the contact biomechanics between an older women's body and a bra.

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特色與優點

- 因應不同需求，定立胸圍組件的設計準則
- 選用特定的面料，具高透氣性、優異吸濕排汗性能、低縮水率與良好外觀和拉伸性

應用

- 日常及戶外服裝產品
- 運動服裝產品

舒適型
前置式磁力扣，可調式肩帶設計

- 前置式磁力扣
- 可調式肩帶設計
- 前中開口配以磁力扣
- 調節式圍扣，配1.8cm闊肩帶橡筋
- 側邊膠骨
- 多款後背設計，可脫式後肩帶
- 雙層罩杯，刺繡面料及涼感內襯

清爽觸感型
抗菌去味

- 可脫式後肩帶
- 可脫式插片薄棉罩杯
- 蕾絲領線及涼感內襯
- 2cm 可調節式闊肩帶
- 配以調節乳溝深度的前中小鈕扣
- 可調式後肩帶

運動型
護乳，吸濕排汗

- 前置式磁力扣
- 前置式肩帶
- 簡易套頭式設計，配Y型領線
- 下擺橡筋高伸開口，配以磁力扣
- 1.8cm闊肩帶橡筋，配前開式肩帶
- 2cm下擺橡筋
- Racer 型後背設計，透汗布料
- 薄棉罩杯，涼感內襯布

舒適承托型
無縫墊的立體式胸型

- 前置式磁力扣
- 前置式肩帶
- 後中開口配以磁力扣
- 前置調節式圍扣，配1.5cm闊肩帶橡筋
- 雙層透汗布料後胸，褲上下擺橡筋
- U形後背設計，側邊膠骨
- 雙層布料罩杯，直筒面料及涼感內襯布
- 加高彈性夾嘴

多功能型
可廣泛用於運動及聚會場合

- 前置式磁力扣
- 前置式肩帶
- 前置式插片薄棉罩杯
- 前置式肩帶
- Racerback 後背設計
- 3/4杯的雙層布料罩杯，附加外側片

逆齡胸圍系列
A collection of Age-friendly bras

Special Features and Advantages

- The design criteria of each bra components were determined based on different requirements
- Special fabrics selected for the bra components which is excellence in air permeability, moisture management property, dimensional stability and stretchability

Applications

- Daily and outdoor apparel products
- Sportswear products

