

47-2020-13932 | Personalized Textile-Based Medical Mask
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Categories	COVID-19,
Keywords	Safety, health, masks,
Current development stage	TRL3 Experimental proof of concept

Application

Facemasks have now become a fact of life and will remain so in the foreseeable future. What was once adopted as a daily accessory in the Far East as a response to poor air quality has now become an essential tool to counter the ongoing global health crisis due to COVID-19. There are multiple mask classifications and targeted end-users. However, the overwhelming variety of mass-produced masks are of a generic shape, resulting in a suboptimal fit that can reduce the effectiveness and result in discomfort, especially when the masks are worn over a long period.

Our Innovation

- A method to customize masks to fit an individual's face exactly
- Assumes a 2D planar surface and is agnostic to the specific material
- Data collected from readily available 3D face scans present in smartphone sensor

Technology

Collaborative research groups from the Hebrew University and The Technion have developed an algorithm that outputs an instruction set to assemble a contour matching 3D mask via a series of cuts and fastenings from a 2D fabric.

Opportunity

The surge in demand for face masks is a reality today. Customization of a mask to an individual's face can increase compliance by reducing discomfort. For companies already including a level of customization of masks at the level of aesthetics, this technology creates an additional feature to improve the quality of personal masks.

Patent Status

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