

Foot GO: The Foot Granular Orthosis

A general foot orthosis that is customizable in shape and has tunable stiffness properties

This general foot orthosis is customizable in shape and has tunable material stiffness properties. Called Foot Granular Orthosis (Foot GO), it allows for instantaneous customization of fit to the plantar surface of the foot and direct control over the material properties of the orthosis. Foot GO is also re-conformable; the custom fit and tunable stiffness can be readjusted multiple times for different activities or for different ailments. Foot GO has the ability to provide a custom fit to an individual's foot with a desired stiffness and can be placed in a shoe to relieve undesirable symptoms.

Summary Bullets

- **Customizable:** Can easily adjust fit and stiffness
- **Simpler:** Has potential to simplify the foot orthosis manufacturing process
- **Re-conformable:** Custom fit and stiffness can be readjusted multiple times for changing needs over time

Solution Advantages

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- **Simpler:** Has potential to simplify the foot orthosis manufacturing process
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Potential Commercial Applications

- Foot health, including for athletes
- Reducing plantar pressures
- Treatment for rheumatoid arthritis, diabetic foot ulcers, plantar fasciitis, or any condition requiring customized alleviation of pressure underneath the foot
- General self-treatment of foot pain due to pressure

Background and More Information

Foot orthoses are widely used to treat athletic, neuromuscular, or neuropathic dysfunction of the foot. The current orthotic manufacturing process has tedious steps and is costly and time consuming. Current commercial orthoses are either mass produced with a generic, non-custom fit, or they require a clinician and patient to undergo a laborious fitting process. Georgia Tech's solution has a simpler manufacturing process and can be

quickly and easily customized to each individual's needs.

Inventors

- Dr. Young-Hui Chang
Associate Professor – Georgia Tech College of Sciences Applied Physiology
- Emily Simonds
Graduate Research Assistant – Parker H Petit Institute for Bioengineering & Bioscience
- I-Ting Chuang
Graduate Student – Georgia Tech College of Sciences Applied Physiology
- Dr. Geza Kogler
Research Scientist II – Georgia Tech College of Sciences Biological Sciences

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Publications

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Images

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