

# Prosthetic Anterior Cruciate Ligament

---

**This technology is a prosthetic device for replacement of the anterior cruciate ligament (ACL)**

Georgia Tech and Mines ParisTech inventors have developed a prosthetic device for the replacement of the ACL. This invention is a synthetic alternative to biological grafts. It has multiple features to sustain and promote healing in the bone tunnel and aspects of this device can be coated with osseointegration-promoting materials. The design of this device gives the surgeon multiple options for fixation including using a suspensory fixation, an aperture fixation, or both.

## Summary Bullets

- **Simpler** - Simplifies the operation
- **Safer** - Prevents unnecessary damage and morbidity at a donor site
- **Readily available** - Obviate need for harvest procedure

## Solution Advantages

- **Simpler** - Simplifies the operation
- **Safer** - Prevents unnecessary damage and morbidity at a donor site
- **Readily available** - Obviate need for harvest procedure

## Potential Commercial Applications

- ACL replacement

## Background and More Information

The ACL is a load bearing structure connecting the femur to the tibia. ACL tearing is a relatively common knee injury often requiring surgical reconstruction, a procedure in which the damaged ACL is replaced with a graft suspended between tunnels drilled in the tibia and femur. Currently, the most commonly used ACL replacements are autografts and allografts created from harvested sections of the patellar tendon or hamstrings. There is a need for a readily available device capable of replacing the ACL.

## Inventors

- Dr. David Ku  
Regents' Professor - Georgia Tech School of Mechanical Engineering
- Jason Bach  
PhD Student - Georgia Tech School of Mechanical Engineering
- Laurent Corté  
Professor - Mines ParisTech Material Center
- Fabrice Detrez  
Post-doctoral researcher - Mines ParisTech Material Center
- Sabine Cantournet
- Mohammed Cherkaoui
- Frances Baxter  
Post Doctoral Fellow

## **IP Status**

: US9180000

## **Publications**

, -

## **Images**

Visit the Technology here:

[Prosthetic Anterior Cruciate Ligament](#)

---

<https://s3.sandbox.research.gatech.edu//index.php/print/pdf/node/3758>