THE UNIVERSITY OF ALABAMA RESEARCH
Office for Technology Transfer

# Remote Sensing and Assessment of Helmet Collision Impacts


## Contact:

**Dr. Rick Swatloski**
Director - OTT
(205) 348-8583
RPSwatloski@ua.edu

## Status:

Seeking R&D and/or licensing partner

Patent Pending

## Inventor:

Dr. W. Steve Shepard Jr.
Professor

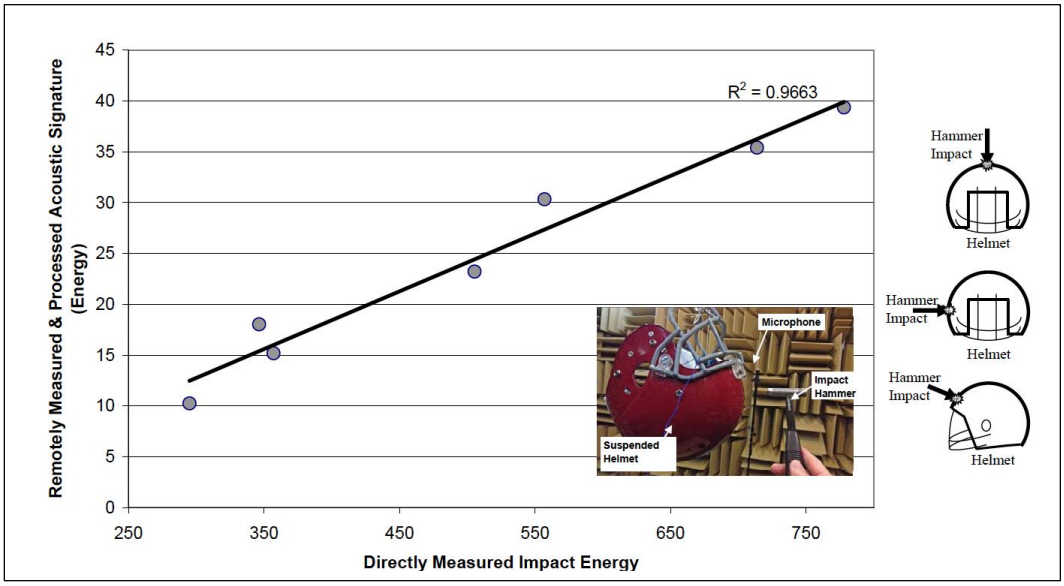
Mechanical Engineering


## Remote Sensing and Assessment of Helmet Collision Impacts

- Sports-related head injuries have recently come under great scrutiny.
  - Need to monitor and identify trauma including measuring impact force
- Instead of having device on player, our technology utilizes remote sensing via microphone array
- Process sound signal to determine collision:
  - Event time
  - Field location
  - Force magnitude, duration, and direction
- Algorithm allows for quick dissemination of simplified results

## Advantages

- Less expensive than helmet sensors since not on individual player
  - Works with any type of helmet since focused on sound emitted during hit
- Low maintenance compared to helmet sensors
- Real-time capability since utilizing sound waves
- Avoids signal interference in venues
- Can determine force level and duration remotely without having to check an individual player's helmet
- Shareable real-time technology
  - One system for multiple teams in one venue




*For More Information, Click to View YouTube Pitch*