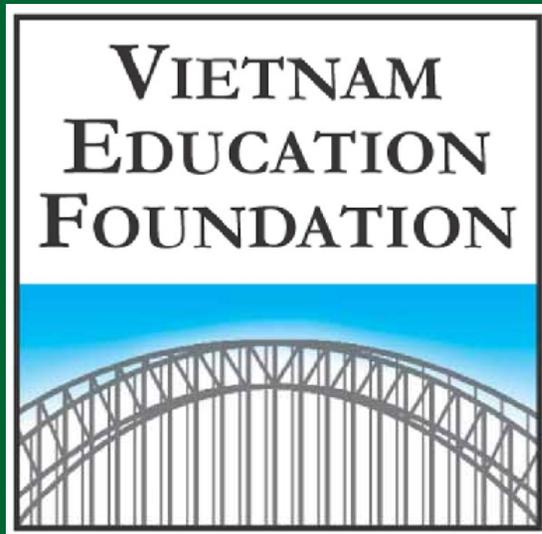




BAYLOR
UNIVERSITY

The HUT/Baylor Engineering Biomechanics Course



Ben Kelley

January 4, 2009

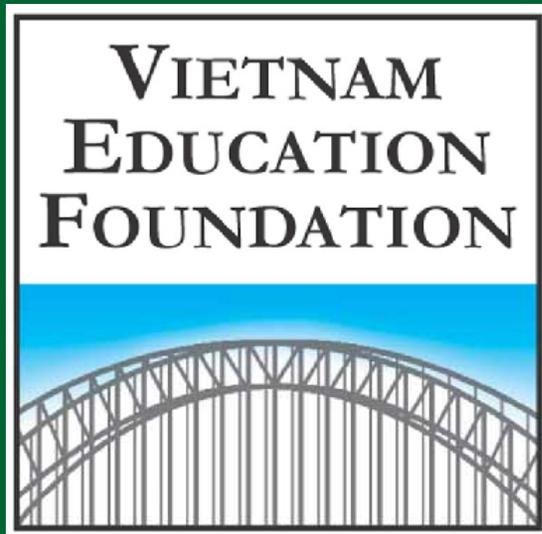
VEF Fellows and Scholars Conference





BAYLOR
UNIVERSITY

Khoa học danh cho sinh viên kỹ thuật y sinh giữa Đại Học Bách Khoa Hà Nội và Đại Học Baylor

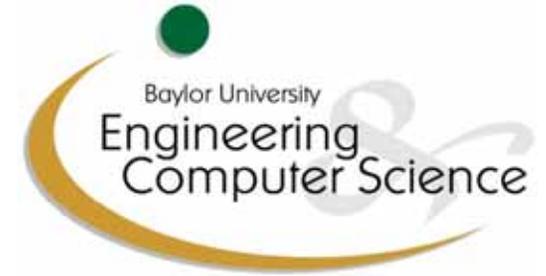


Ben Kelley

January 4, 2009

VEF Fellows and Scholars Conference





About Prof. Ben Kelley

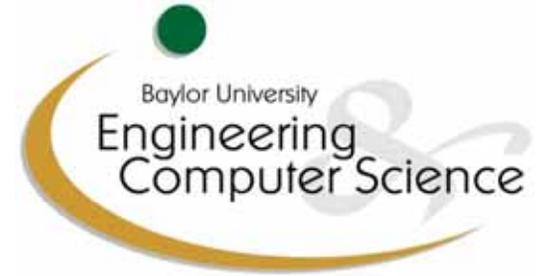
- **At Baylor University**

- Dean, School of Engineering & Computer Science
- Specialty- Biomedical Engineering
 - Orthopedic BIOMECHANICS & CARDIOVASCULAR Dynamics

- **For Viet Nam**

- Youngest son- Born Ha Noi 1992

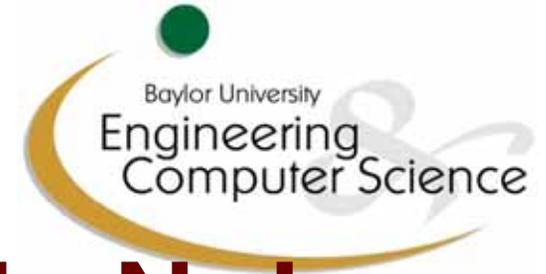




BSK & International

- Kazakhstan
- South America; Scandinavia
- Saudi Arabia
- Iraq
- Kenya
- China
- Viet Nam





Dai Hoc Bach Khoa Ha Noi

Biomedical Engineering (BME)

- **Dept. of Electronic Technology and Biomedical Engineering, since 1999**
- **Biomedical/hospital instrumentation**
- **2007- Awarded MOET ADVANCED BME**
 - In English
 - Work with U.S. University
 - Offer broader curriculum
 - i.e., **Biomechanics** ♥



Biomechanics Course

- **Design Project**

- On paper... Design report... Design presentation
- Orthopedic fracture fixation plate



- **Course Book**

- Slides... Readings... Assignments

- **Course Format**

- 2 weeks BK... 11 weeks Baylor... 2 weeks BK
- 2 x $\frac{2}{3}$ x 2 x



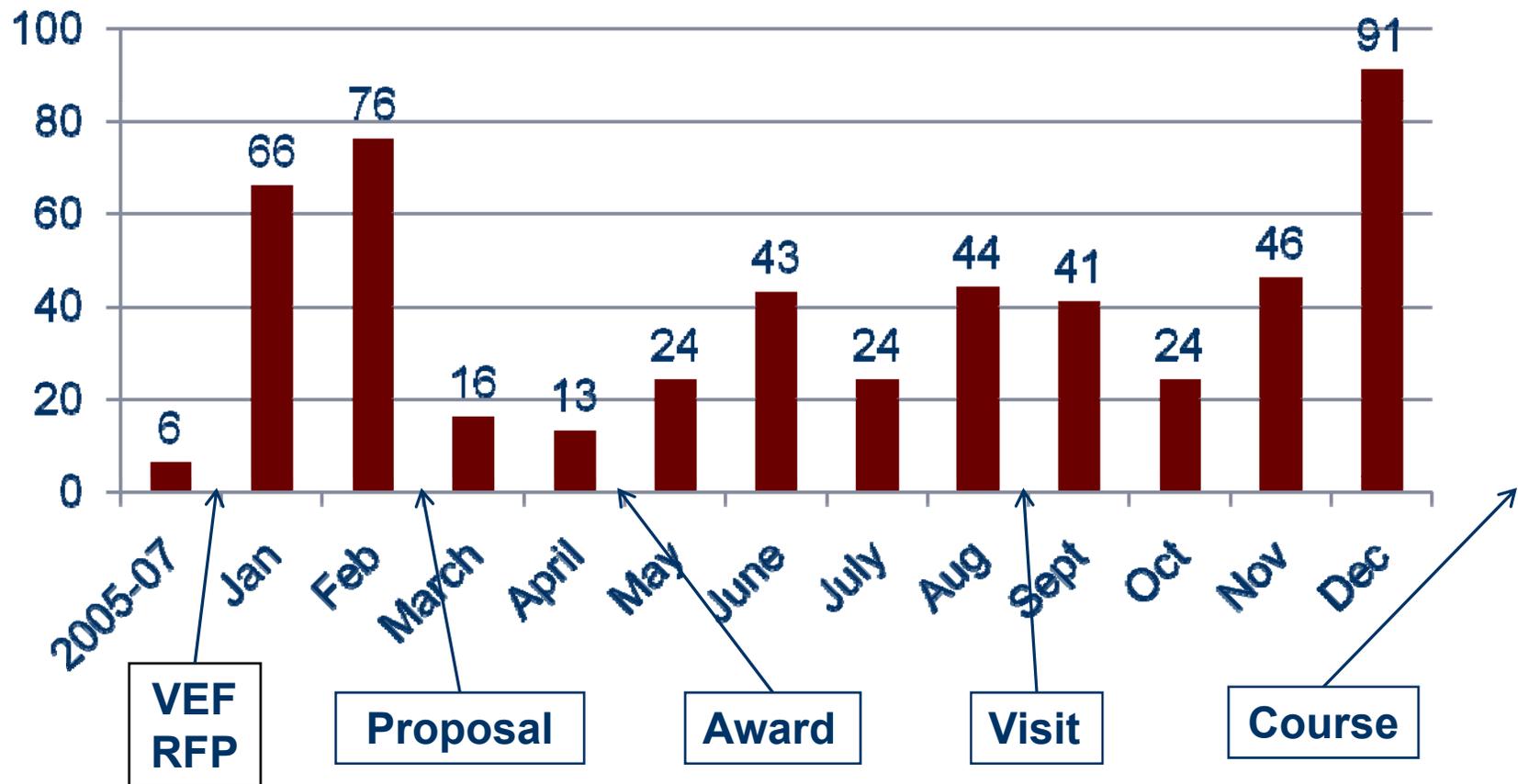
Course Topics



Engineering Biomechanics

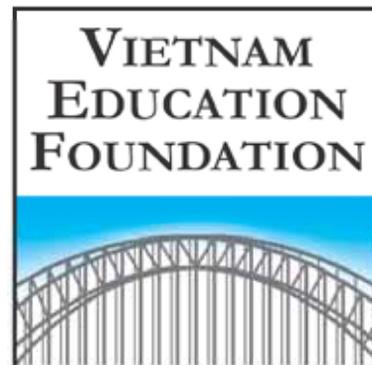
- **Moments/torques**
- **Statics**
- **Stresses & strain**
- **Fracture mechanics**
- **Parallel axis theorem**
- **Bending stresses**
- **Design analysis**
- **Diarthrodial joints**
- **Wear & lubrication**
- **Articular cartilage**
- **Sliding filament theorem**
- **Wolf's Law**
- **Orthopedic implants**
- **Viscoelasticity**

Viet Nam emails 516 total as of 2-Jan-08





**Dai Hoc
Bach Khoa
Ha Noi**



**Baylor
University
Waco, Texas**