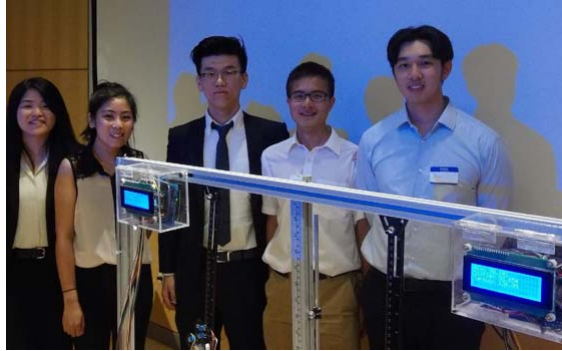


CoMet: Canine Measurement Frame

Madeleine Espejo, Kelly Aoyama, Youqi Sha, Zhuorui Li, Bo Zhang



The problem: Improving body conformation measurement in dogs

- Body conformation in dogs refers to external details of their anatomy that make up their overall structure and appearance.
- Proper diagnosis and consistent monitoring of body conformation is essential to treating dogs predisposed to chondrodystrophy.
- There is currently no device that can measure limb length, joint angle, and wither height at the same time.
- **Solution:** A measurement frame device that can measure six joint angles, limb length and wither height.



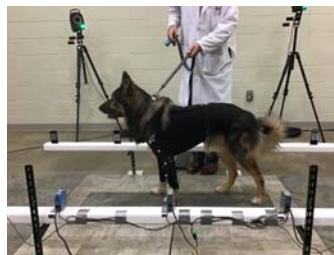
Ranger: Canine Hinge Joint Protection Device

*Kevan Bruce, Jasmeet Kaur, Emmery Leighton,
Nicolette Sarmiento, Ashley Yu*



The problem: Need for joint stabilization

- UC Davis Veterinary Medicine performs about 100 canine elbow surgeries per year
- Extra protection and stability post-surgery is needed to aid healing and prevent loss of motion
- Current solutions don't allow gradual return to full range of motion
- **Solution:** A device to stabilize the canine elbow joint post-surgery and allow incremental adjustment to joint range of motion



Exo-K9: Non-invasive Fixation Device for Canines with Maxillomandibular Fractures

*Patrick Foster, Christian Lu, Matthew Ho,
Jennifer Nguyen, Anthony Sorbera*



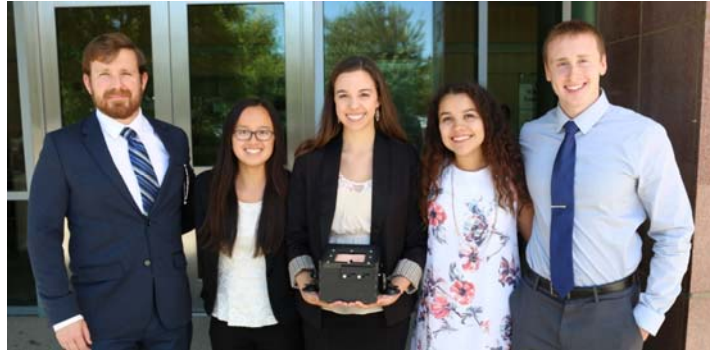
The problem: Non-surgical fracture fixation

- Current non-surgical methods for fixation of skull and jaw fractures are uncomfortable, not customizable, and do not provide adequate support
- Leads to infection, improper healing, recurring injury
- **Solution:** A customizable 3D printed cast and adjustable hinge mechanism to provide support throughout the healing process



CSLIM: Canine Suspensory Ligament Model

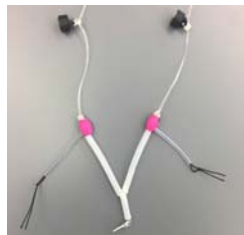
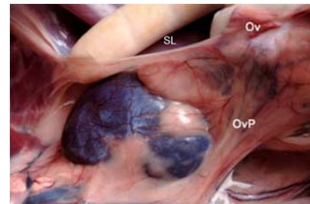
*Crystal Avila, Riley Edsen, Edward Golden,
Kathleen Hornbacker, Megan Loy*



CSLIM
Canine Suspensory Ligament Instructional Model

The problem: Need for surgical training tool

- During canine ovariohysterectomy , surgical removal of the ovary requires manual detachment of the suspensory ligament
- Limited opportunities for veterinary students to practice the technique outside of a live animal
- **Solution:** A veterinary teaching model that accurately mimics the suspensory ligament detachment procedure that is realistic and repeatable



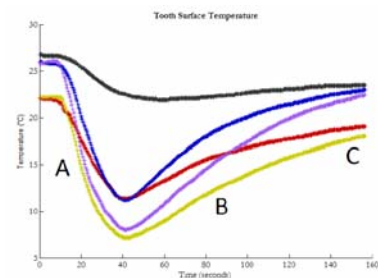
TOTEM: Tooth Temperature Measurement for Pulp Vitality Testing:

*Jan Louise Perez, Harikrishna Rallapalli,
David Randolph, Varsha Viswanath*



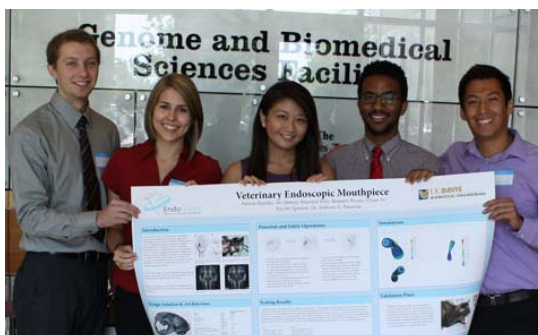
The problem: Detecting tooth viability

- Pulp viability in dogs assessed by tooth discoloration
- Misdiagnosis leads to costly and invasive root canals
- Solution: A device that uses thermography to rapidly and non-invasively assess pulp vitality



EndoGuard: A Veterinary Mouthpiece for Dentistry and Endoscopy:

*Patrick Hanafin, Avi Mehari, Mauricio Pirir,
Shannon Prouty, Vivian To*



The problem: Procedure-induced blindness

- Devices used to keep mouth open during endoscopic procedures in cats prevent blood flow and lead to blindness
- Solution: A device that prevents jaw overextension while protecting equipment

