Senior Design Day
April 24, 2015
UNT Discovery Park
Computer Science and Engineering

- Team JAWS                  Sponsor: Jim Buchanan
- Cobra Alpha 5              Sponsor: Kris Chesky
- Team Royal                 Sponsor: Thomas Parsons, Ph.D.
- Division by Zero           Sponsor: Mitchell Altimus
- Firecode                   Sponsor: Dr. Krishna Kavi

Construction Engineering Technology

- Grey Matter Construction   Sponsor: UNT Systems
- RAX Construction           Sponsor: KWA Construction
- Mean Green Bridge & Road   Sponsor: Aaron Berry with Mario Sinacola & Sons
- Lonestar Construction      Sponsor: TX Morrow Construction, Inc.

Electrical Engineering

- Wi-Fi Access Point Communication System Sponsor: Dr. Kamesh Namuduri
- VECTOR                     Sponsor: Dr. Xinrong Li
- Power Management System for Autonomous Sustainable Brackish Desalination System: Design of Hybrid Maximum Power Point Tracking Controller Sponsor: Dr. Acevedo
- Air Shield                 Sponsor: Dr. Kamesh Namuduri
- The Librarian              Sponsor: Dr. Kamesh Namuduri
- Life Protection Car        Sponsor: Dr. Hyoungsoo Kim
- Esoteric                   Sponsor: Dr. Parthasarathy Guturu
- IlluminUNTis               Sponsor: Dr. Kamesh Namuduri
- RF Front end Sub-System for LET Signal Sponsor: Dr. Hyoungsoo Kim
- Electrical Design Team for Society of Automotive Engineers Sponsor: SAE for UNT
- Rocket                     Sponsor: NASA

Electrical Engineering Technology

- Arduino High-Definition Radio
- Retro Frequency Counter
- Real-Time FPGA Audio Effects Generator
- High-Data Rate, Low-Power Wireless Sensor Network for Structural Health Monitoring Sponsor: NSF grant #1244129

Information Technology

- DNL Solutions              Sponsor: UNT CSE Department
- SQL Solutions              Sponsor: Daisy Gillam and David Keathly
- Color Your Hat             Sponsor: Jim Buchanan
- Team RamRod                Sponsor: Jim Buchanan

Materials Science and Engineering

- Comparison of API X65 5L PSL 1 and PSL 2 carbon steel in a simulated aqueous sour gas environment Sponsor: Cory Weinbel, Denbury Resources, MTSE UNT
- Design Optimization of Multi-Layer Ceramic Ballistic Plates
• Coatings for 600V Metal Wires  Sponsor: Encore Wire Corporation
• Friction Stir Welding of Dissimilar Alloys  Sponsor: Center for Friction Stir Processing
• Functionally Graded Novel Beta Titanium Alloys for Orthopedic Implants Via Additive Manufacturing
• Precipitation Control of ATIAllvac 718Plus Alloy for Engine Application  Sponsor: ATI Specialty
• Thermal Stability Studies on Structure and Tribological Properties of Diamondlike Carbon Nanocomposite (DLN) Films
• Varied Length-Scale Porous Metallic Structures  Sponsor: Dr. Samir Aouadi and Dr. Marcus Young

**Mechanical and Energy Engineering**

• Big Rock Oil  Sponsor: Victor Lopez, President of the Big Rock Oil Company
• Team Capstone  Sponsor: Capstone Metering, Inc.
• ASME Human Powered Vehicle  Sponsor: ASME
• The Mean Green Energy Efficient Building Simulation  Sponsor: Trane
• Music Box  Sponsor: Franky Gonzalez
• Team Ghost Pepper  Sponsor: Peterbilt Motors Company
• Isolated AC System  Sponsor: Peterbilt Motors Company
• Raytheon Rocket Nozzle Optimization  Sponsor: Raytheon Space & Airborne Systems
• Scuba L.E.A.P.  Sponsor: Cecil Simpson
• Friction Stir Welding of Dissimilar Materials  Sponsor: UNT
• Evaluation of Vehicle Performance of Non-Pneumatic Tires  Sponsor: Dr. Jaehyung Ju
• MG Ti Engineers  Sponsor: Dr. Rajiv Mishra
• Modification of a Treadmill  Sponsor: Dr. Brian McFarlin/UNT Kinesiology Department
• S.E.E Venturi System  Sponsor: West Texas Fabrication- Mr. Jim Fletcher
• Deployable Ozone Guardian  Sponsor: Dr. Kuruvilla John
• NHTSV ESV Competition  Sponsor: Dr. Yu
• Cellular Phone Functional Testing Device  Sponsor: Genco
• Formula SAE-Suspension Team  Sponsor: SGA, Monster Tool Company, Odyssey Aerospace Components, Wheat Ridge Manufacturing, Bell Helicopter, Mark Nicholas, Fastenal, Peterbilt, Solidworks, RBC Bearings, SKF Bearings, Brembo Brakes, Brush Research Manufacturing, SAMPE, Red Bull, AEM, Miltera, QA1, Cycle Center of Denton, Online Metals, CRD Manufacturing, and Diamond Cycles
• Thermal Expansion Storage  Sponsor: Dr. Mun
• Team Hydra  Sponsor: Center for Friction Stir Processing at UNT

**Mechanical Engineering Technology**

• FSAE Chassis Team  Sponsor: UNT SGA, Monster Tool Company, Odyssey Aerospace Components, Wheat Ridge Manufacturing, Bell Helicopter, Mark Nicholas, Fastenal, Peterbilt, Solidworks, RBC Bearings, SKF Bearings, Brembo Brakes, Brush Research Manufacturing, SAMPE, Red Bull, AEM, QA1, Cycle Center of Denton, Online Metals, CRD Manufacturing, and Diamond Cycles
• Team 2
• UNT by Design  Sponsor: Dr. Yu & UNT Department of Engineering Technology
• Paddle Powered Wheel Chair Attachment  Sponsor: Wallace Johnston and Mitty Plummer