



Projects Funded Through NFPA's Education Fund 1999-2008

Projects Currently Underway or Complete

1. Brillion School District, *Fluid Power: An Interactive Approach to Learning*, Mr. Steve Meyer
2. Central Community College, *ACCESS: Technology Education on the Move*, Professor Doug Pauley
3. Georgia Institute of Technology, *Introduction of Pneumatic Systems into ME2110: Creative Decisions and Design*, Professor William Singhose
4. Georgia Institute of Technology, *Expansion of Pneumatic Systems into ME2110: Creative Decisions and Design*, Professor William Singhose
5. Iowa State University, *Hydromechanic Transmission Trainer*, Professor Brian Steward
6. Iowa State University, *Fluid Power-based Autonomous Agricultural Vehicle*, Professor Brian Steward
7. Iowa State University, *Controller Area Network (CAN)*, Professor Brian Steward
8. Iowa State University, *Enhancing Fluid Power Learning Through Animation and Visualization*, Professor Brian Steward
9. Iowa State University, *Design Pneumatic Systems for Robotic Arable Farming*, Professor Lie Tang
10. Iowa State University, *Pneumatic Weed Control System Development for Agricultural Robot*, Professors Lie Tang and Brian Steward
11. Iowa State University, *Distributed Sensing and Control of Hydraulic Circuits*, Professor Matthew Darr
12. Milwaukee School of Engineering, *2nd Generation Hydraulic SAE Mini-Baja Car*, Professor Tom Labus
13. Milwaukee School of Engineering, *Solar Splash Electric Boat*, Professor Tom Labus
14. Milwaukee School of Engineering, *Design of a Human-Fluid Powered Vehicle*, Professor Tom Labus
15. Milwaukee School of Engineering, *Compact Variable Displacement Motor for Human Powered Vehicles*, Professor Tom Labus
16. Milwaukee School of Engineering, *Design of a Human-Fluid Powered Vehicle*, Professor Tom Labus
17. Milwaukee School of Engineering, *TRAX an Electro-Hydraulic Remote Controlled Robot*, Professor Tom Labus
18. Oklahoma State University, *Electrohydraulic Technology for Two Actuators*, Professor Young Chang
19. Oklahoma State University, *Low-cost Automation with Pneumatic Fluid Power Systems*, Professor Young Chang
20. Oklahoma State University, *Hydraulic Material Testing Machine*, Professor Young Chang
21. Purdue University, *Hydrostatic 1/4 Scale Tractor*, Professor John Lumkes
22. Purdue University, *Development of Controller Area Network (CAN) Based Training Station for Industrial and Mobile Applications*, Professor John Lumkes
23. Purdue University, *Hydraulic Dynamometer for Small to Medium Sized Engines*, Professor John Lumkes
24. Purdue University, *Measurements of Cavitation in Hydraulic Valves*, Professor Jan Lugowski
25. Purdue University, *Portable Pneumatic Trainer for Hands-On Demonstrations*, Professor John Lumkes
26. UFSC/LASHIP – Laboratory of Hydraulic and Pneumatic Systems, *Proportional Hydraulics Platform: Work Bench*, Professor Victor De Negri
27. UFSC/LASHIP – Laboratory of Hydraulic and Pneumatic Systems, *Temperature Control System for Hydraulic Power Units*, Professor Victor De Negri
28. UFSC/LASHIP – Laboratory of Hydraulic and Pneumatic Systems, *System for the Pneumatic Circuits Sizing (SPCS)*, Professor Victor De Negri
29. University of Illinois at Urbana-Champaign, *Maintenance and Fault Diagnosis Tools for Hydraulic Pumps*, Professor Qin Zhang
30. University of Illinois at Urbana-Champaign, *Study of Influences of Control Methods on E/H System Responses and Performance*, Professor Qin Zhang
31. University of Illinois at Chicago, *Development of a Electrohydraulic Independent Metering Valve Instruction Bench*, Professor Sabri Cetinkunt
32. University of Illinois at Chicago, *Independent Metering Valves for Energy Efficient Hydraulic Systems*, Professor Sabri Cetinkunt
33. University of Minnesota, *R/C Model Engine Powered Hydraulic Actuator*, Professors Perry Li & William Durfee

34. University of Minnesota, *Undergraduate Electro-hydraulic Control Research Experience*, Professor Perry Li
35. University of Minnesota, *Hydraulic Exoskeleton*, Professor. Perry Li
36. University of Missouri - Columbia, *Modeling the Trapped Volume in an External Gear Pump*, Professor Noah Manring
37. University of Montana, *Fluid Power System Efficiency Student Laboratory*, Professor Keith Fisher
38. University of Northern Iowa, *A Comparison of the Energy Requirements for Soy-based and Petroleum-based Hydraulic Fluids*, Professor Lou Honary
39. University of Waterloo, *Pneumatic Test Rig for Research and Education*, Professor Ehsan Toyserkani
40. University of Wisconsin at Madison, *Engineering Projects in Community Service (EPICS) Moo-v-ability Projects*, Professor Frank Fronczak
41. Youngstown State University, *Flow Analysis through a Hydraulic Valve Body*, Professor Hazel Pierson
42. Youngstown State University, *Pneumatically Powered Hexapod Walking Robot*, Professor Shawn Kim
43. Youngstown State University, *Piston Pump Based Hydraulic Dynamometer for a Chevy Engine*, Professor Ganesh Kudav
44. Vanderbilt University, *Control of Pneumatic Robots for Interaction Tasks*, Professor Eric Barth
45. Western Michigan University, *Online Hydraulic Control for Remote Experimentation in Mechanics*, Professor Alamgir Choudhury

Competitions

1. FIRST Robotics Competition, including the Pneumatic Fanatic Website
2. SME Robotics Competition
3. CFPA Hilltop Challenge

Other Funding

1. Central Community College, *Web-based Pneumatic Training Program*, Professor Doug Pauley
2. Central Community College, *Mechatronics Education Center*, Professor Doug Pauley
3. Georgia Institute of Technology, *Fluid Power and Motion Control Center HUSCO/Ramirez Chair*, Professor Wayne Book
4. University of Missouri at Columbia, *The Rolf Fluid Power Laboratory & Endowed Professorship in Fluid Power*, Professor Noah Manring
5. University of Missouri at Columbia, *Textbook Development: Hydraulic Control Systems*, Professor Noah Manring
6. Purdue University, *MAHA Fluid Power Laboratory*, Professor Monika Ivantysynova
7. Pneumatic Fanatic Website
8. NFPA's Educator/Industry Summits
9. NFPA's distance learning and research symposium webcasts