
Electrical & Computer Engineering
S E M I N A R
Louisiana State University

**Pegasus I, the First Incarnation of the LSU
Flying Automobile (Jointly hosted by the
IEEE, ASME and AIAA Student Chapters)**

J. Jim Zhu

Division of Engineering Research, LSU

Abstract—This talk will present a plan for developing a radio controlled model of flying automobile Pegasus I at the LSU Division of Engineering Research. Pegasus I is the first step towards the ultimate goal of a wingless, VTOL aeromobile. It will have delta wings which fold up in driving mode. The vehicle will be driven by an electric motor in driving configuration, with a size about 1/3 that of a typical automobile. The flying configuration will be developed in two phases. In Phase A, Pegasus I-A, a light weight (9 kg) airframe driven by a pusher propeller will be built. Once the flying quality is assured, Pegasus I-B, a heavier (25-35 kg), more rigid airframe powered by two mini turbojet engines will be developed in Phase B. VTOL capability will be added to future incarnations of the Pegasus to reduce the size of, and to eventually eliminate, the wings.

Vehicle components will be developed mainly as student design/research projects. Innovative research and design topics include, but are not limited to, drive-by-wire and fly-by-wire control and actuation systems, direct-drive wheels, a lifting-body airframe, low-power VTOL technology, and dual-use vehicle components such as suspension, propulsion, vehicle control, and avionics. These will be discussed in more detail in the presentation.

It is anticipated that construction of the Pegasus I-A will be complete by the end of Fall 2000, and flight tests be completed by the end of Spring 2001. It is intended to enter the Pegasus I-A in the 2001 NASA-FAA-AFRL National General Aviation Student Design Competition. Pegasus I-B will be developed in another year, followed by future incarnations of the Pegasus.

When: Wednesday, 12 April 2000, 19:00 - 20:30

Where: CEBA 1110

Info: <http://www.ee.lsu.edu/seminar>