SEMINAR ANNOUNCEMENT
FACULTY OF ENGINEERING

Date: **Wednesday, March 30, 2011**
Time: **11:00 - 12:00**
Place: **Cevdet Kösemen Conference Hall**
Faculty of Engineering
Everyone is invited.

Simulation of Flow Around Moving Objects

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Abstract. Many fluid flow problems involve moving components such valve systems, flapping and oscillating wings, etc. Computational Fluid Dynamics simulation of these problems requires a special handling of the mesh around the moving components. Various techniques have been proposed over the years. We have implemented two mesh-moving techniques into our flow solver packages: overset mesh and deforming mesh. Our flow solver, CaMEL, is a second order accurate mixed finite element / finite volume discretization on fully unstructured mesh. Two test cases are presented, an oscillating projectile and flapping wing.

About the Speaker. Dr. Yilmaz graduated from the Aeronautical Engineering Department in the Middle East Technical University with BSc, MS, and PhD degrees. He worked in TUBITAK-SAGE and TUBITAK-MAM. He worked in Sikorsky-USA and CASA-Spain as on-the-job trainee on aircraft and helicopter design. Soon after his PhD he started to work in IUPUI, Indianapolis, IN, USA, as post-doctorate researcher, then a research associate. Currently, he is employed as Research Assistant Professor in the Northrop Grumman Center for HPC in Jackson, Mississippi, USA. His areas of interest include parallel computing and CFD modeling and algorithm development in aerospace, mechanical, environmental, and energy fields.