



# UNIVERSITY OF CALIFORNIA RIVERSIDE

DEPARTMENT OF MATHEMATICS

## Colloquium

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**Dr. Gung-Min Gie**  
(UCR)

“Boundary layers of the Navier-Stokes equations”

**Abstract:**

In most practical applications of fluid mechanics, it is the interaction of the fluid with the boundary that is most critical to understanding the behavior of the fluid. Physically important parameters, such as the lift and drag of a wing, are determined by the sharp transition the air makes from being at rest on the wing to flowing freely around the airplane near the wing. Mathematically, the behavior of such flows is modeled by the Navier-Stokes equations. In this talk, I will discuss the asymptotic behavior of solutions to the Navier-Stokes equations at small viscosity under various boundary conditions.

**Wednesday, December 5<sup>th</sup>, 2012**

**Surge 284**

*Tea Time 3:40 p.m. – Talk Begins 4:10 p.m.*