$\mathbf{T}_{\text{EMPLE}} \; \mathbf{U}_{\text{NIVERSITY}} \; \mathbf{M}_{\text{ATHEMATICS}} \; \mathbf{C}_{\text{OLLOQUIUM}}$ 

## Michael Vogelius

Rutgers University

will speak on

## Nonlinear Neumann problems related to corrosion modeling

ABSTRACT: In this talk I will discuss various questions about solutions to elliptic and parabolic boundary value problems associated with corrosion modeling. In the steady state (elliptic) case this includes questions about existence of solutions, multiplicity of solutions and boundary "blow-up" for limiting choices of parameters. In the parabolic case there are associated questions about whether a given initial datum leads to blow-up in finite time or to global existence.

> Monday, 30 November 2009 Lecture at 4:00 pm Coffee, tea, and refreshments from 3-5 pm Room 617, Wachman Building Department of Mathematics