

# Computational Physics Seminar

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Wednesday 10/25, 4:30pm  
Willet Science Center 101

## **Finite Element Simulation of Creep Buckling of CIPP Liners**

In this talk I will briefly report a finite element simulation of instantaneous and long-term buckling phenomena of cured-in-place plastic (CIPP) liners as used in trenchless rehabilitation. Emphases will be on how to incorporate various sources of nonlinearity into the finite element model, including elastoplasticity, creep characteristics, and contact between liner and the host pipe. Related concepts such as buckling, creep, and FEM will be introduced. Agreement between FEA results and data from short- and long-term experimental studies will be demonstrated.

*Please join us for light refreshments  
at 4:15pm outside WSC 109.*