

Use of the Discrete Vortex Method to Calculate Wind Loads over  
a Surface-Mounted Prism and a Bridge Cross-Section with Flaps

Nathan Louis Maines

Thesis submitted to the Faculty of the  
Virginia Polytechnic Institute and State University  
in partial fulfillment of the requirements for the degree of

**Master of Science**  
in  
**Engineering Mechanics**

Dr. Muhammad R. Hajj, Chairman  
Dr. Dean T. Mook, Committee Member  
Dr. Scott L. Hendricks, Committee Member

May 2005  
Blacksburg, Virginia

Keywords: Discrete Vortex Method, surface-mounted prism, aerodynamic force control

© Copyright 2005, Nathan L. Maines