

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Two – phase direct simulation of remediation of snow drifting around buildings in three dimensions¹ E. MALDONADO, M.W. ROTH, University of Northern Iowa — We present the results of two - phase numerical simulations of controlling snow drifting around buildings in three dimensions with deflection fins. The first phase involves numerical calculation of the air velocity profile around the building and fin using a velocity – pressure Navier – Stokes solver, while the second phase involves direct classical simulation of snowfall with particle - particle interactions introduced to control clumping and drifting. We are able to consider deflection fins having novel shapes as well as the effect of crosswinds.

¹We gratefully acknowledge support from UNI Facilities and Maintenance

Michael Roth
University of Northern Iowa

Date submitted: 22 Nov 2009

Electronic form version 1.4