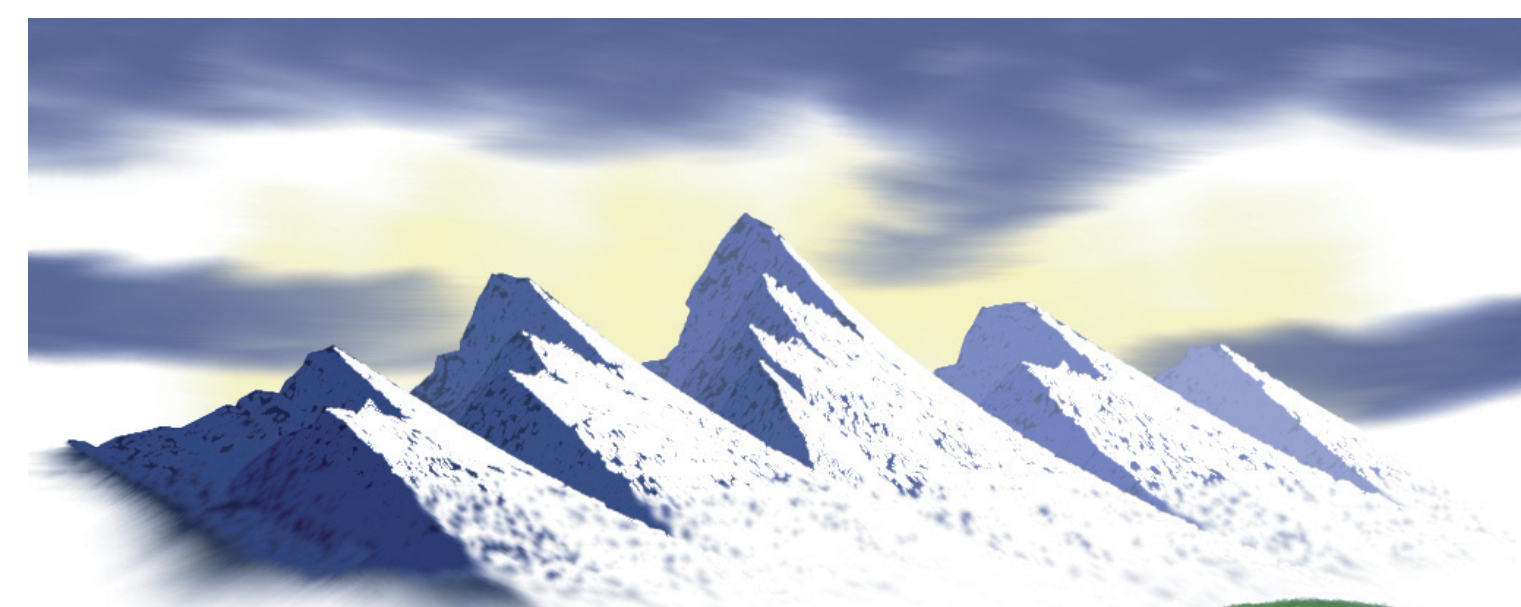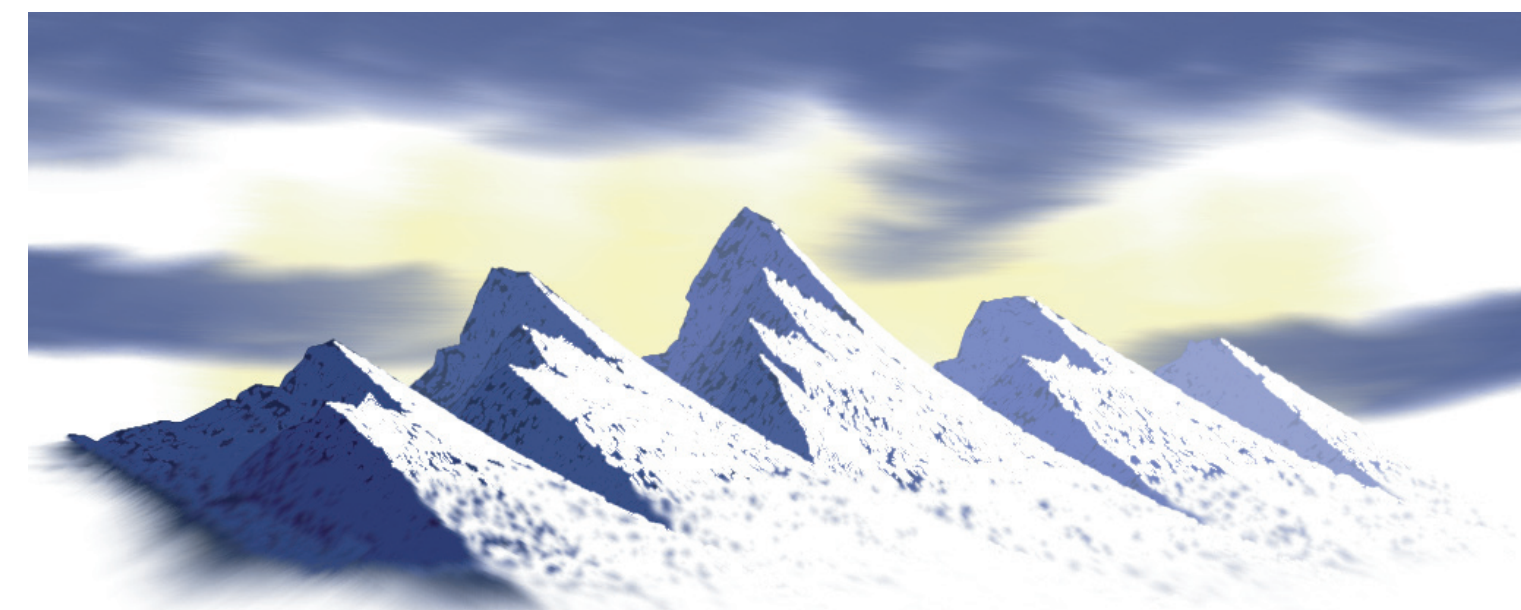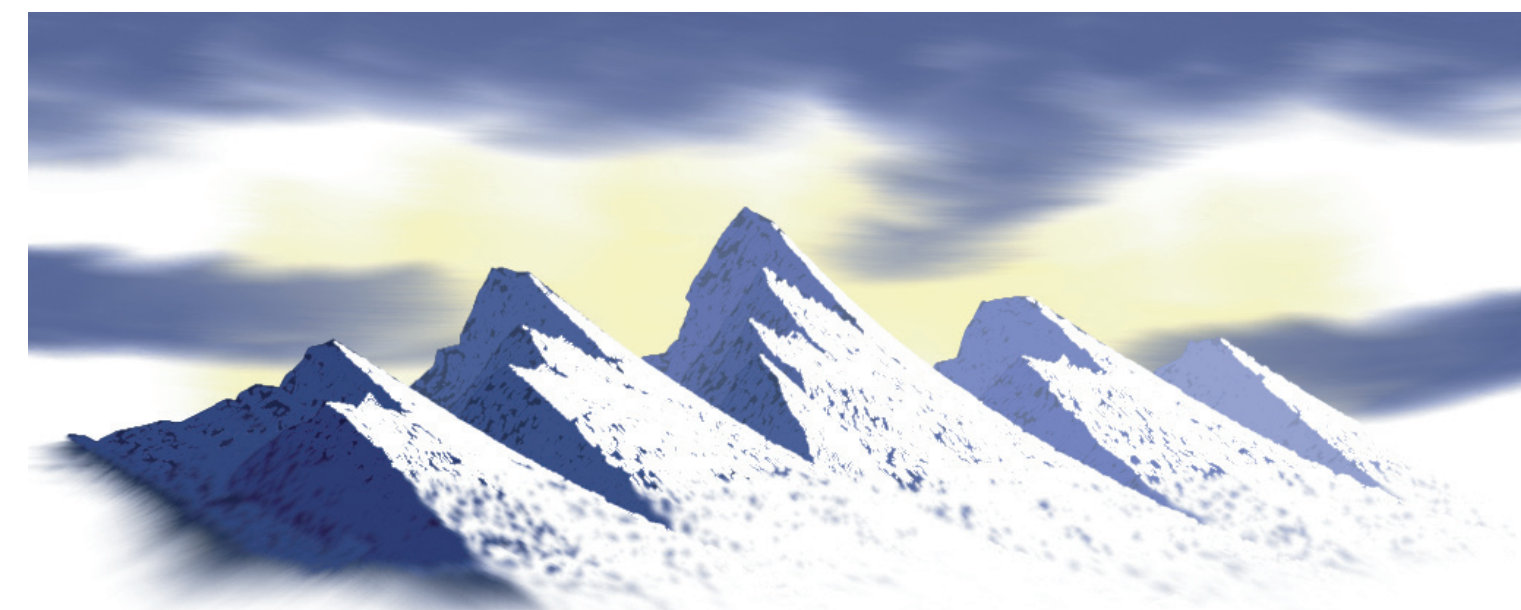# Automated Landscape Painting in the Style of Bob Ross

Alex Kalaidjian • Craig S. Kaplan • Stephen Mann

Computer Graphics Lab, David R. Cheriton School of Computer Science, University of Waterloo

Research in non-photorealistic rendering often focuses on reproducing specific artistic styles. Unfortunately, many artists are unwilling or unable to articulate the technical basis of their style. Bob Ross is a notable exception. He left behind a complete and explicit record, in print and on video. His paintings cut many corners in the representation of reality, but they are convincing. Bob Ross is an ideal artist to study in the pursuit of painterly rendering algorithms.

We have developed a system that simulates Bob Ross's painting technique down to the stroke level. It can generate infinite variations of his "Forest Hills" painting. Our system has three layers:

- a brush stroke layer that simulates the way Bob Ross applies paint to canvas;

- a landscape feature layer that paints individual features such as trees and mountains, using appropriate brush strokes; and

- a landscape layout layer that paints a sequence of landscape features to compose the painting.