

Merry Christmas
and a Happy New Year
2025



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Can you guess where this festive winter scene is?

This Christmas card captures a winter wonderland created through an end-to-end pipeline starting from a precise geographic location (latitude and longitude) of a tree and captivating it into a seasonal masterpiece. The terrain is reconstructed using high-resolution Digital Elevation Models (DEMs), providing a realistic foundation for the scene. The trees are modeled at a high level of detail, with the Christmas tree featuring realistic branches, foliage, and festive decorations.

Using L-System-based modeling, a branching structure is developed within the Digital Surface Model (DSM) [1], ensuring detailed branches. Orthophotos provide realistic textures for the ground and tree canopy. Shadows and shading are computed using sun direction estimates derived from the orthophoto, adding to the depth and authenticity of the snowy terrain. Gifts and glowing lights are procedurally placed around and on the trees. The entire scene was created using a combination of custom scripts for procedural generation and Blender [2] for rendering. So, where is this charming place?

Here's a hint: This location is closely tied to our Research Unit and its hosted events!

From all of us at the Research Unit of Computer Graphics, we wish you a Merry Christmas and a Happy New Year! May your holiday season be filled with joy and laughter. We hope the coming year brings you happiness, success, and inspiration in all your endeavors.

[Click](#) for the solution!



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