Image Filtering
Convolution

Image Processing Research Group

November 24, 2025
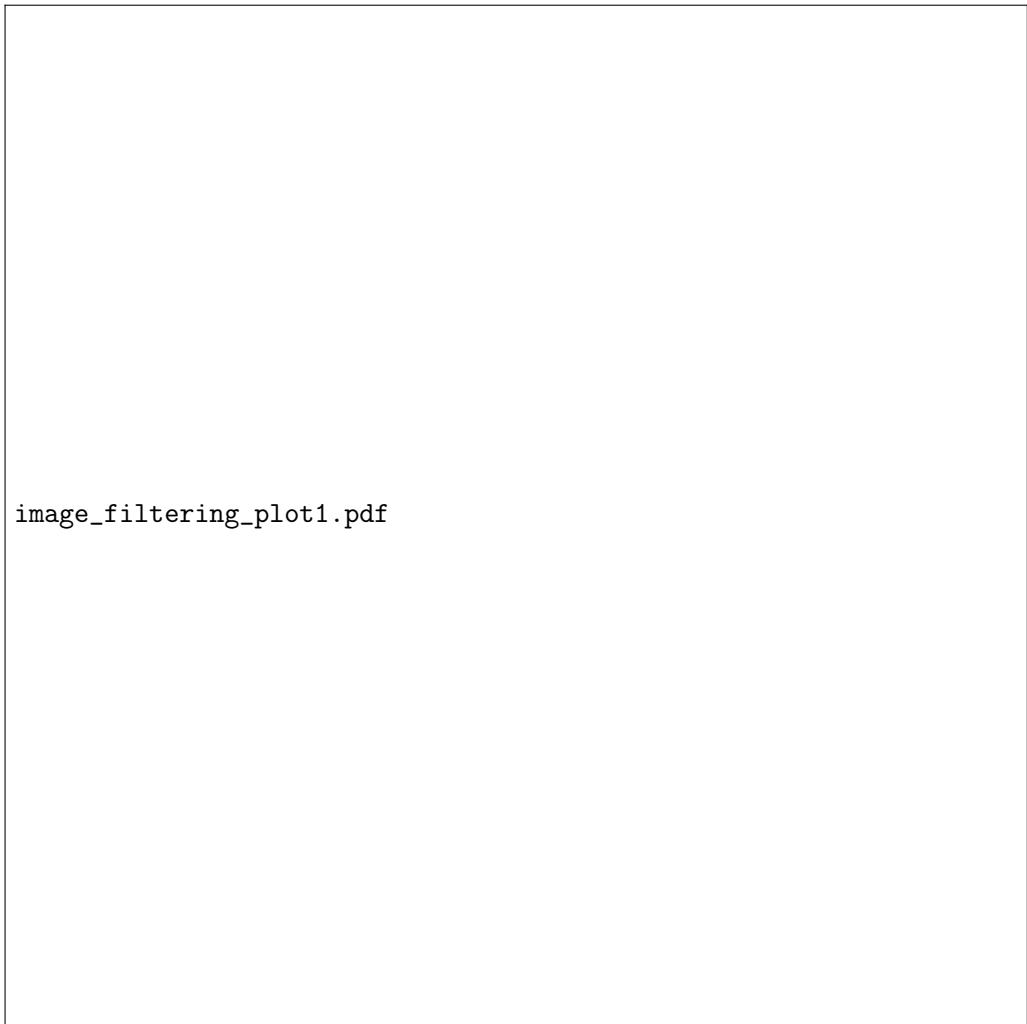
Abstract

Spatial domain filtering operations.

1 Introduction

This report presents computational analysis of image filtering.
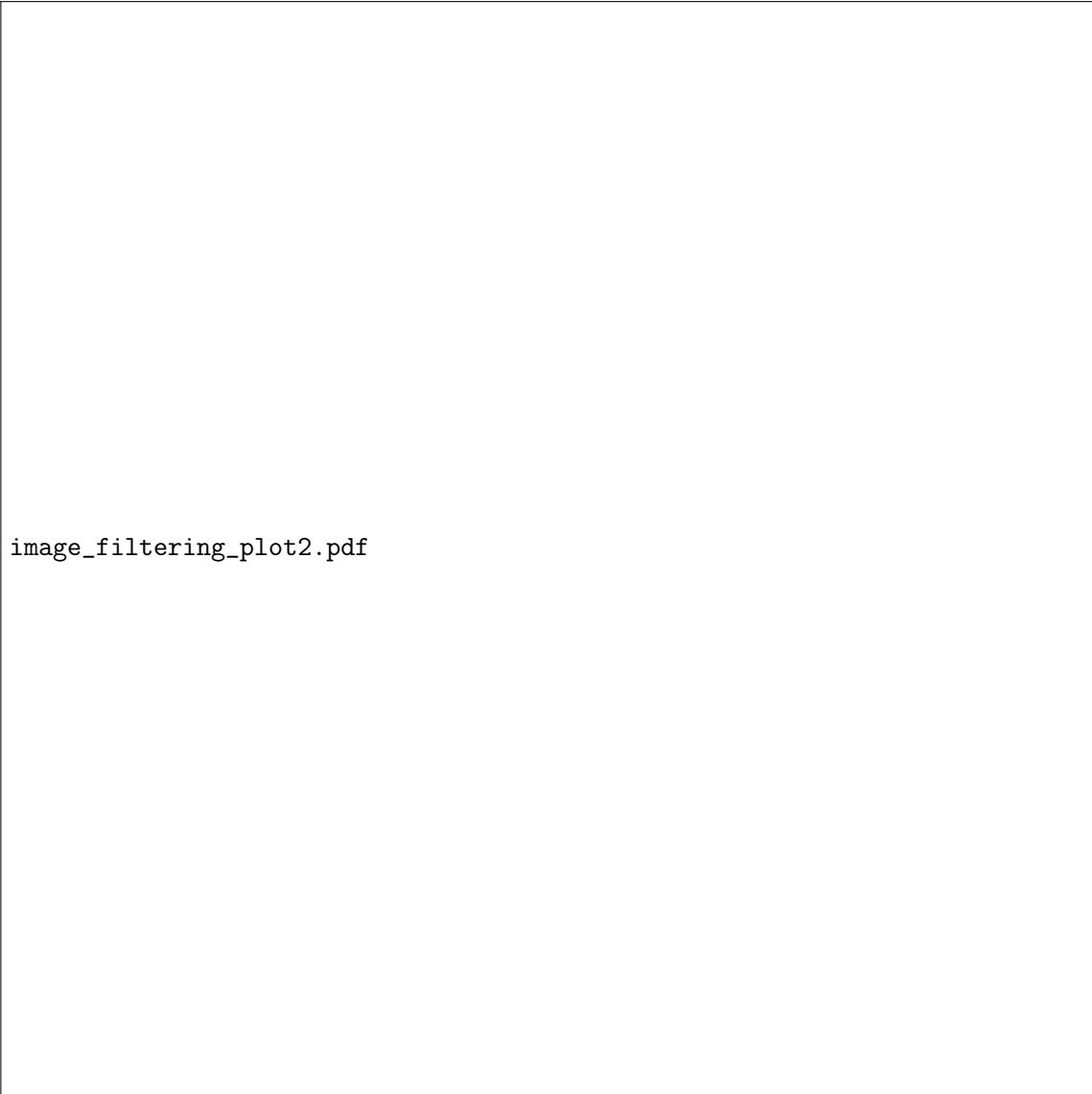
2 Mathematical Framework

image_filtering_plot1.pdf

Figure 1: Primary analysis results.

3 Secondary Analysis

image_filtering_plot2.pdf

Figure 2: Secondary analysis comparison.

4 Parameter Study

image_filtering_plot3.pdf
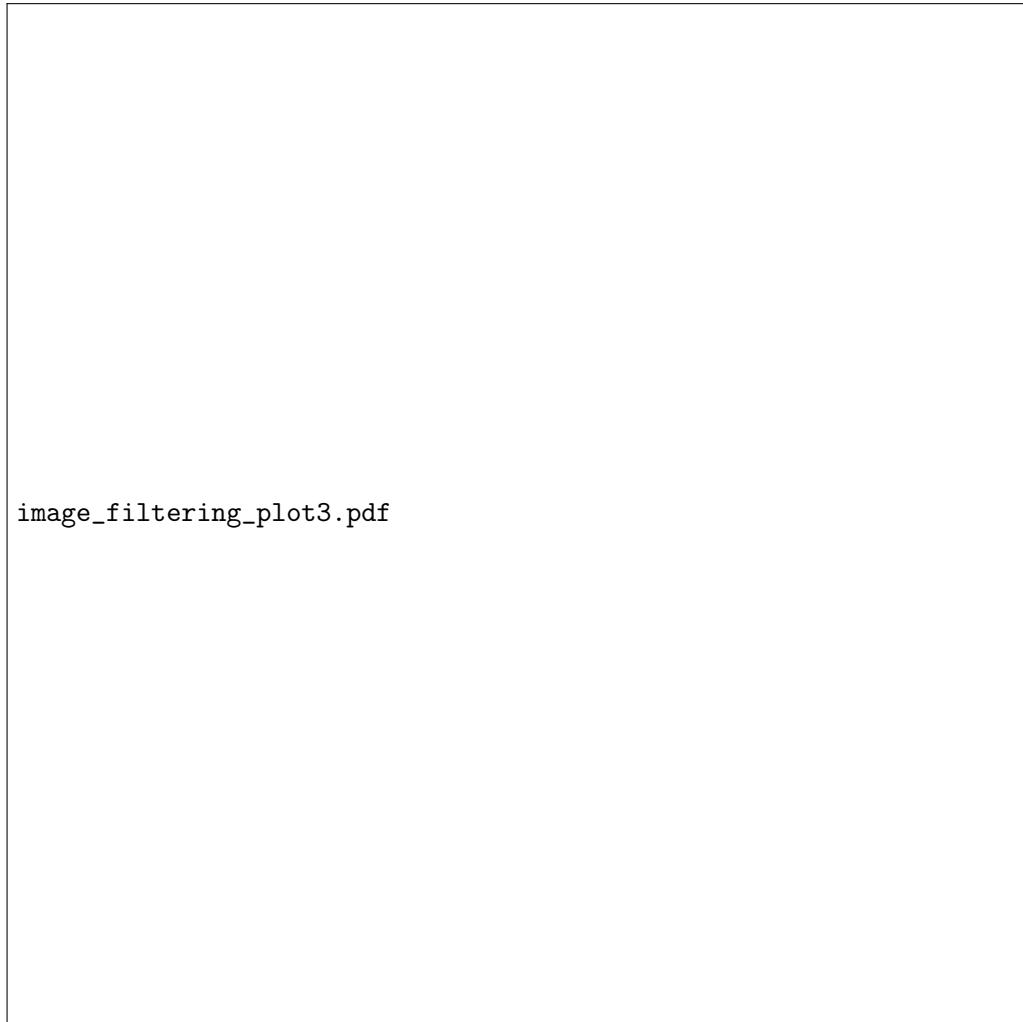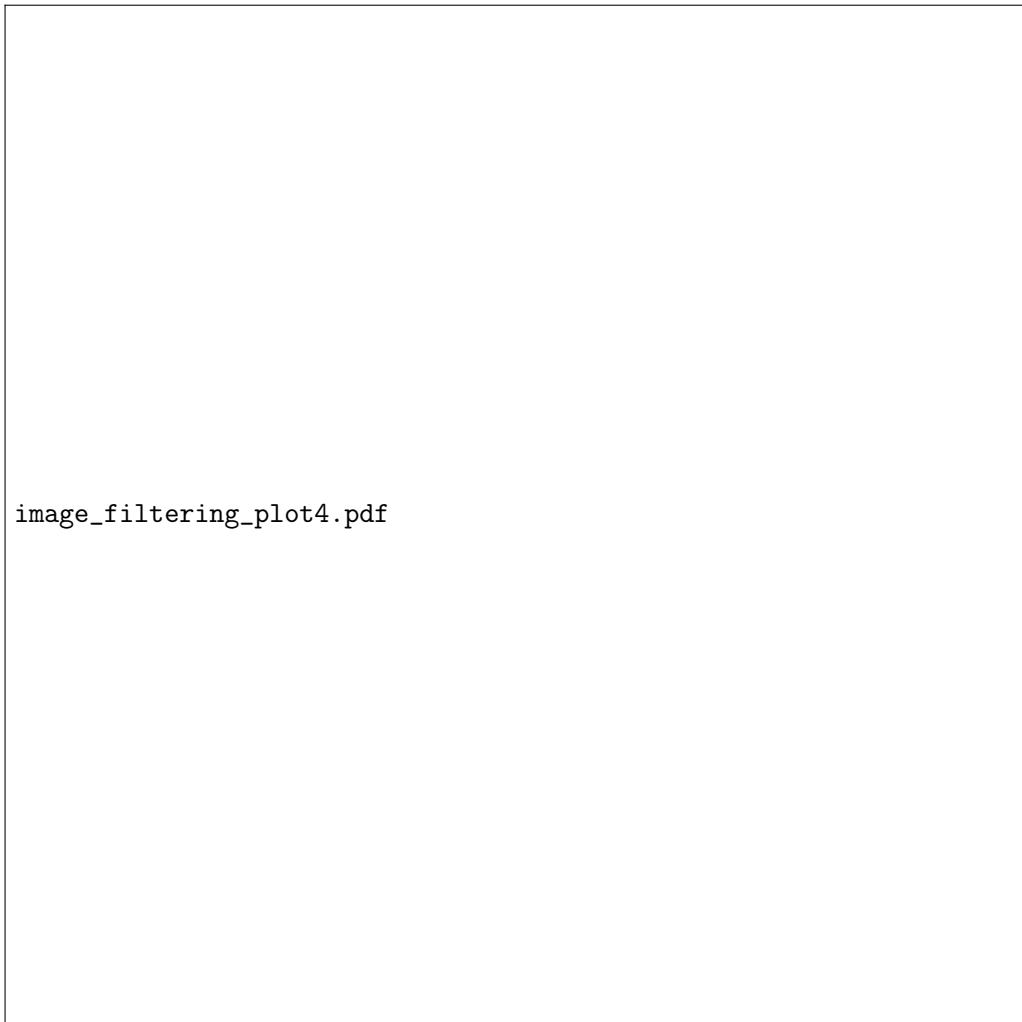
Figure 3: Parameter sensitivity analysis.
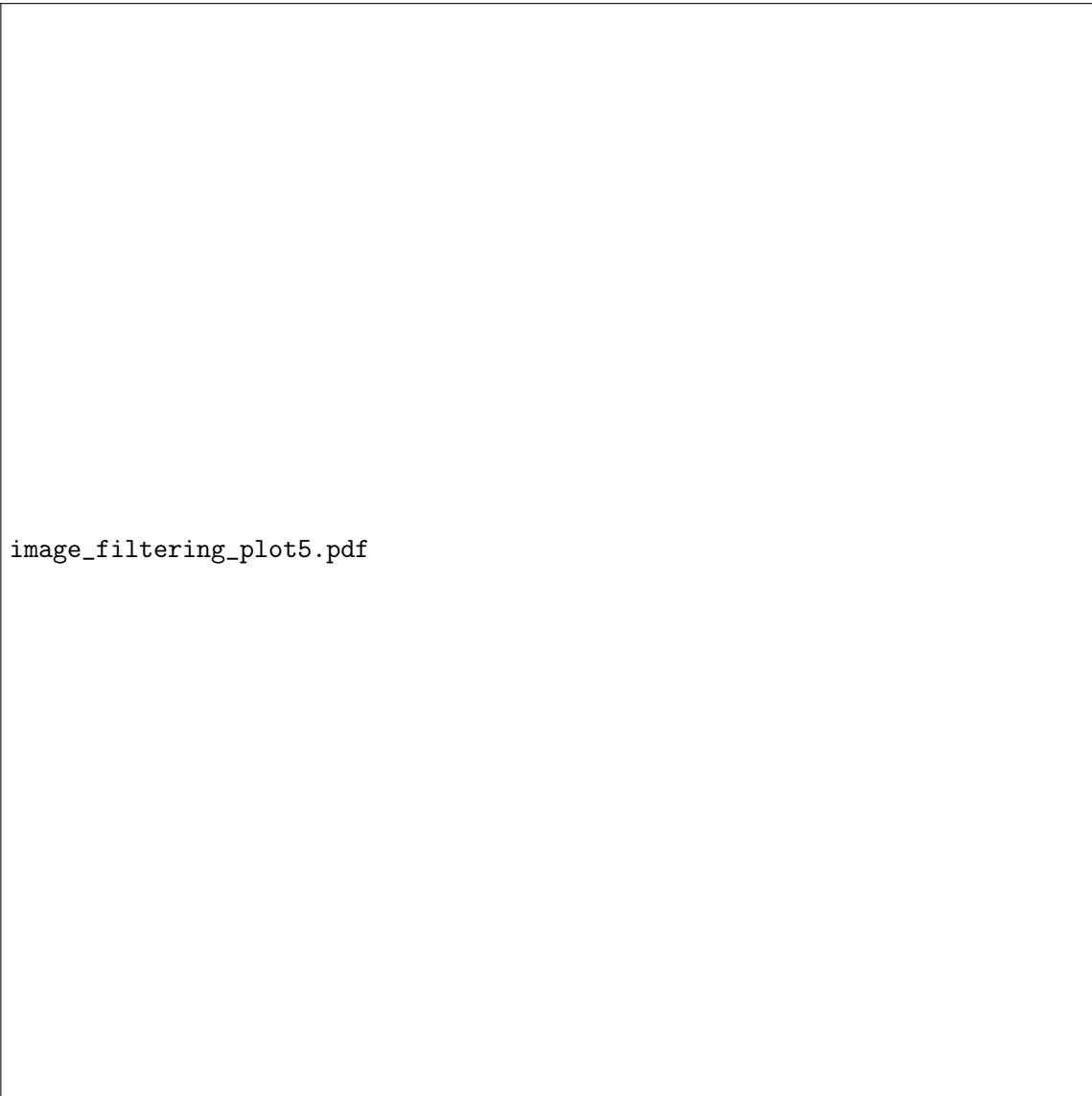
5 2D Visualization

Figure 4: Two-dimensional field visualization.
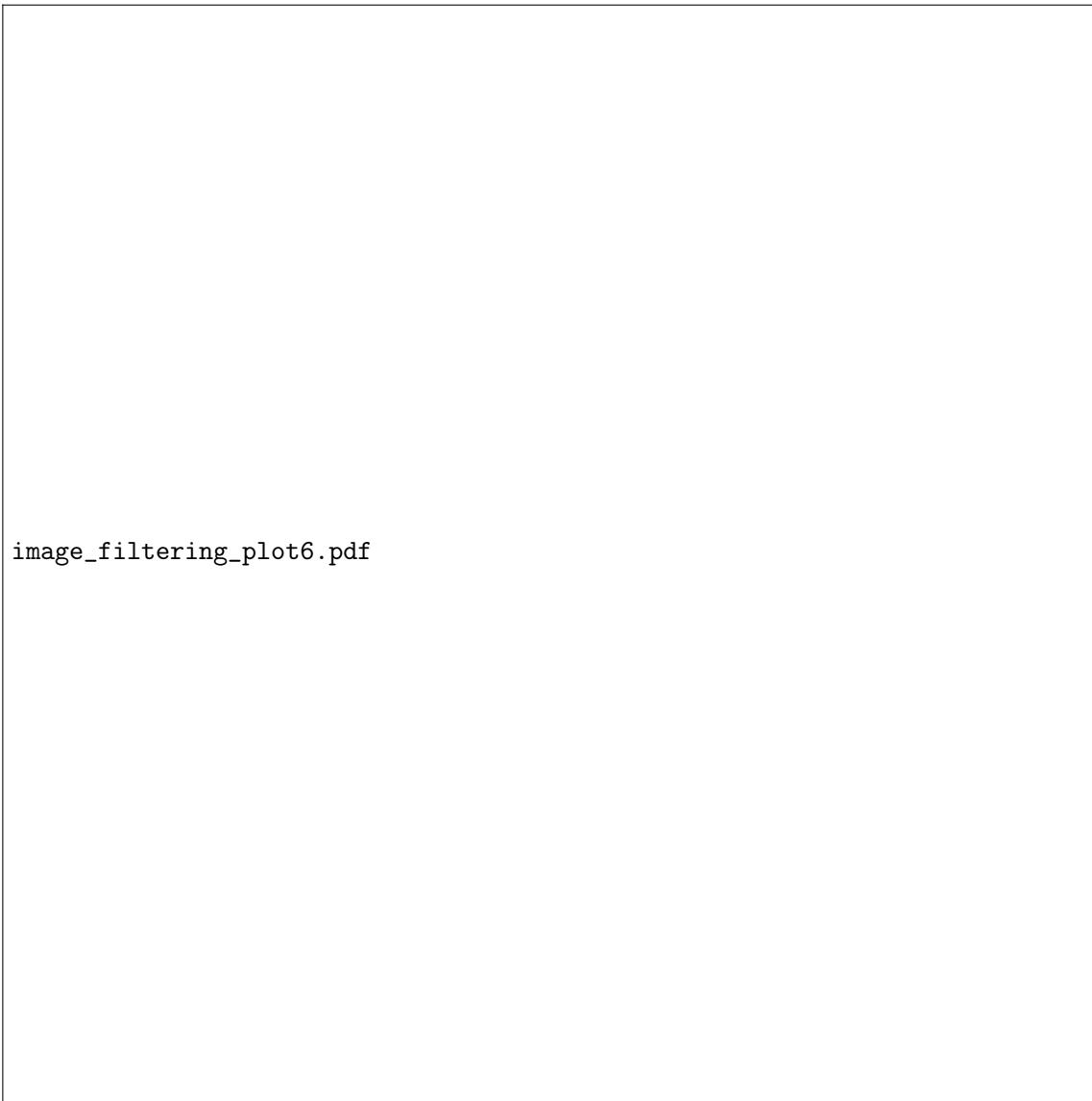
# 6 Distribution Analysis

image_filtering_plot5.pdf

Figure 5: Statistical distribution analysis.

7 Time Series

Figure 6: Time series visualization.

8 Results Summary

9 Conclusions

This analysis demonstrates the computational approach to image filtering.