

# Geometry Processing Lab 2012

## Anisotropic Filtering of Non-Linear Surface Features

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### 1 Introduction

Nowadays, geometric data acquired through imaging or scanning devices has grown rapidly due to advances in technology, making it affordable in many aspects of our lives. However, when dealing with real data we always have to cope with measurement error which brings high frequency noise to our geometric models. Many researches have been conducted in order to remove noise from a scanned model while trying to preserve the underlying sampled surface. One of the seminal results was the work of Taubin et al. [Tau95] in which they use a signal processing approach to derive the Laplacian operator acting as a low-pass filter on the geometric signal. [HP04]

### 2 Mean Curvature

### 3 Conclusion

### References

- [HP04] Klaus Hildebrandt and Konrad Polthier. Anisotropic filtering of non-linear surface features. *Computer Graphics Forum*, 23:391–400, 2004.
- [Tau95] Gabriel Taubin. A signal processing approach to fair surface design. In *Proceedings of the 22nd annual conference on Computer graphics*

*and interactive techniques*, SIGGRAPH '95, pages 351–358, New York, NY, USA, 1995. ACM.