

LU Visualisierung 2010

2. Beispiel: Strömungsvisualisierung

Simon Parzer und Stefan Fiedler

Unsere Implementierung

- Binary Search

`FlowGeometry::getNearestVtx()`

- Bilinear Interpolation

`FlowGeometry::getInterpolationAt()`

- 100% Software Rendering
- Evenly Spaced Streamlines
- Entwicklung mit C++ und Qt SDK

Datei

Color Coding

☒ Active

Channel 3

Gradient Heat

Gradient

Min Max



Vector Channels

Channel X 0

Channel Y 1

Channel Length 5

Arrow Plot

☐ Active

Arrow Distance 20 px

☒ Scale Arrows

Arrow Size 80 %

Streamlines

☒ Active

Integration Runge-Kutta

Time Step 0,0010

Maximum Steps 5000

Spacing Even

Seed Distance 50 px

dSep 12 px

dTest 6 px

☒ Tapering

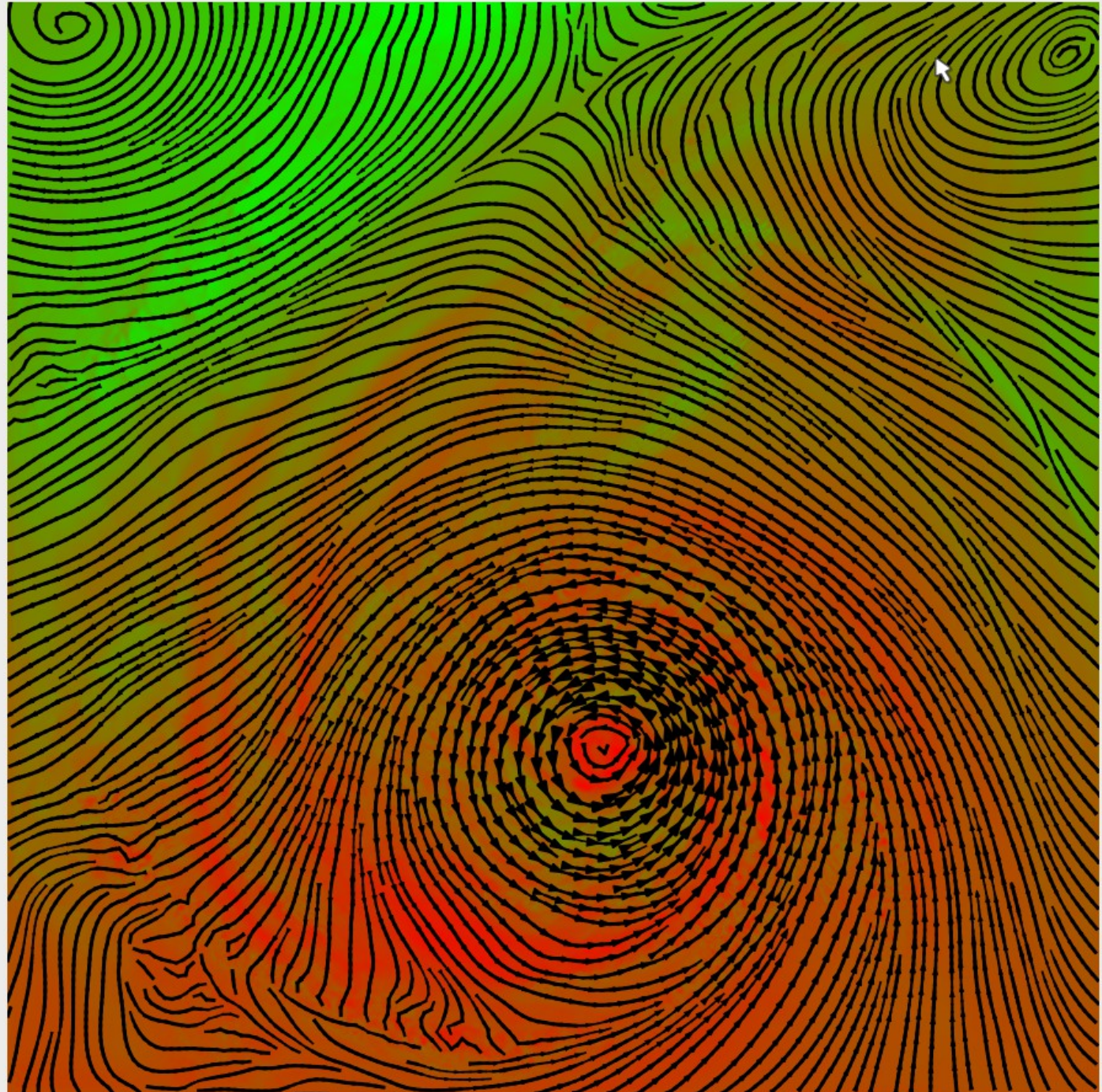
Maximum Width 3 px

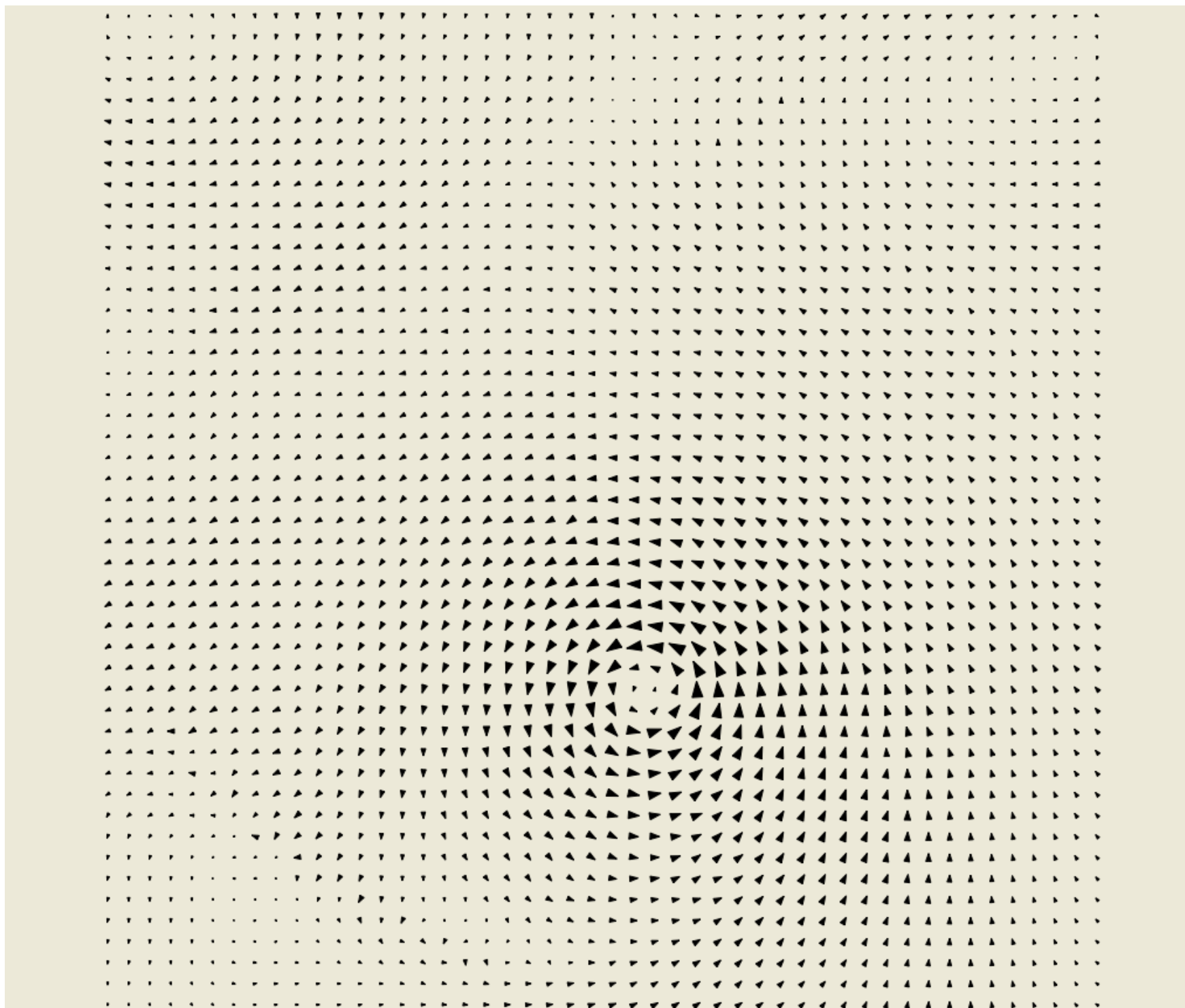
☒ Glyph Mapping

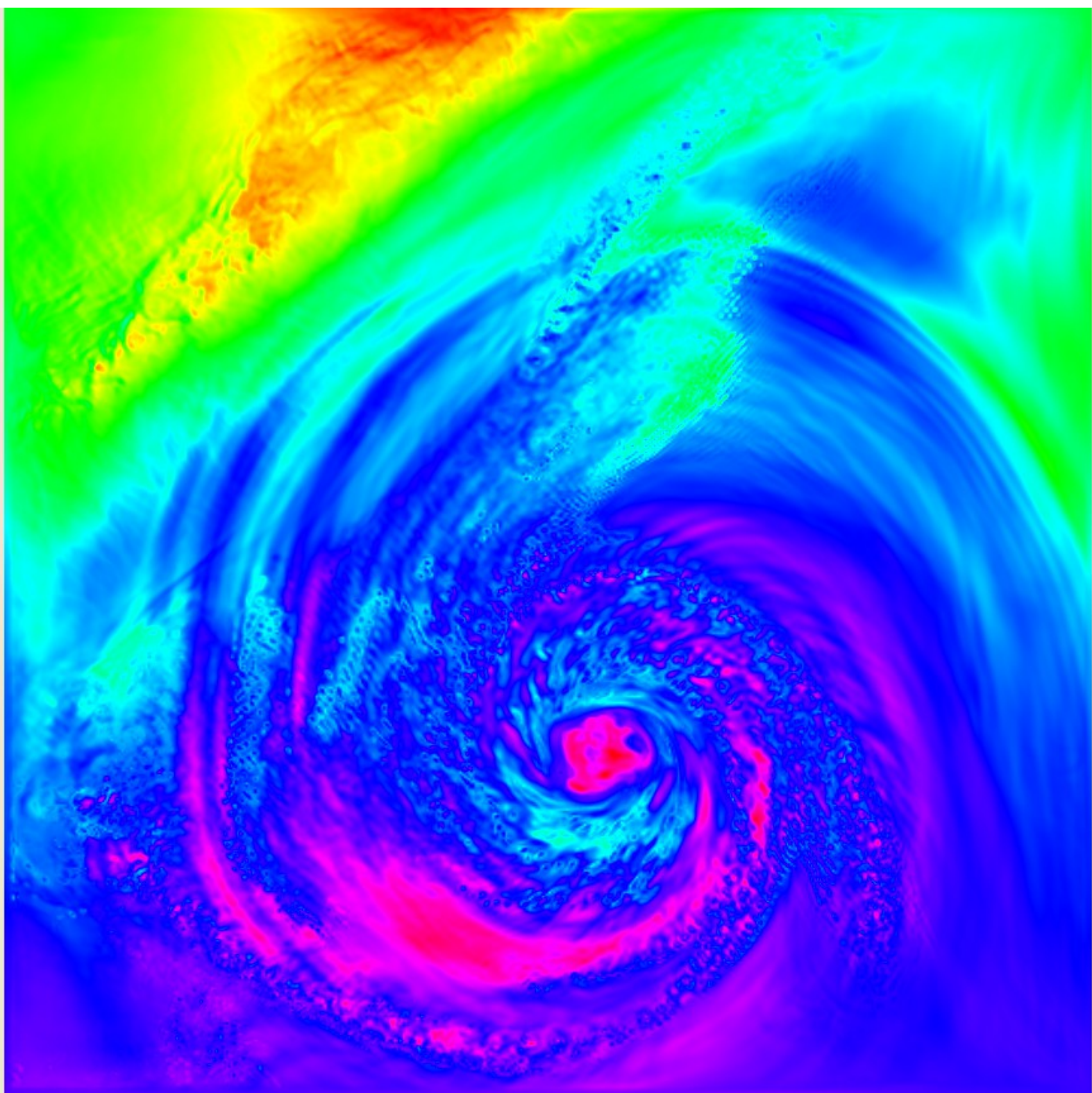
Glyph Distance 20 px

Glyph Size 70 %

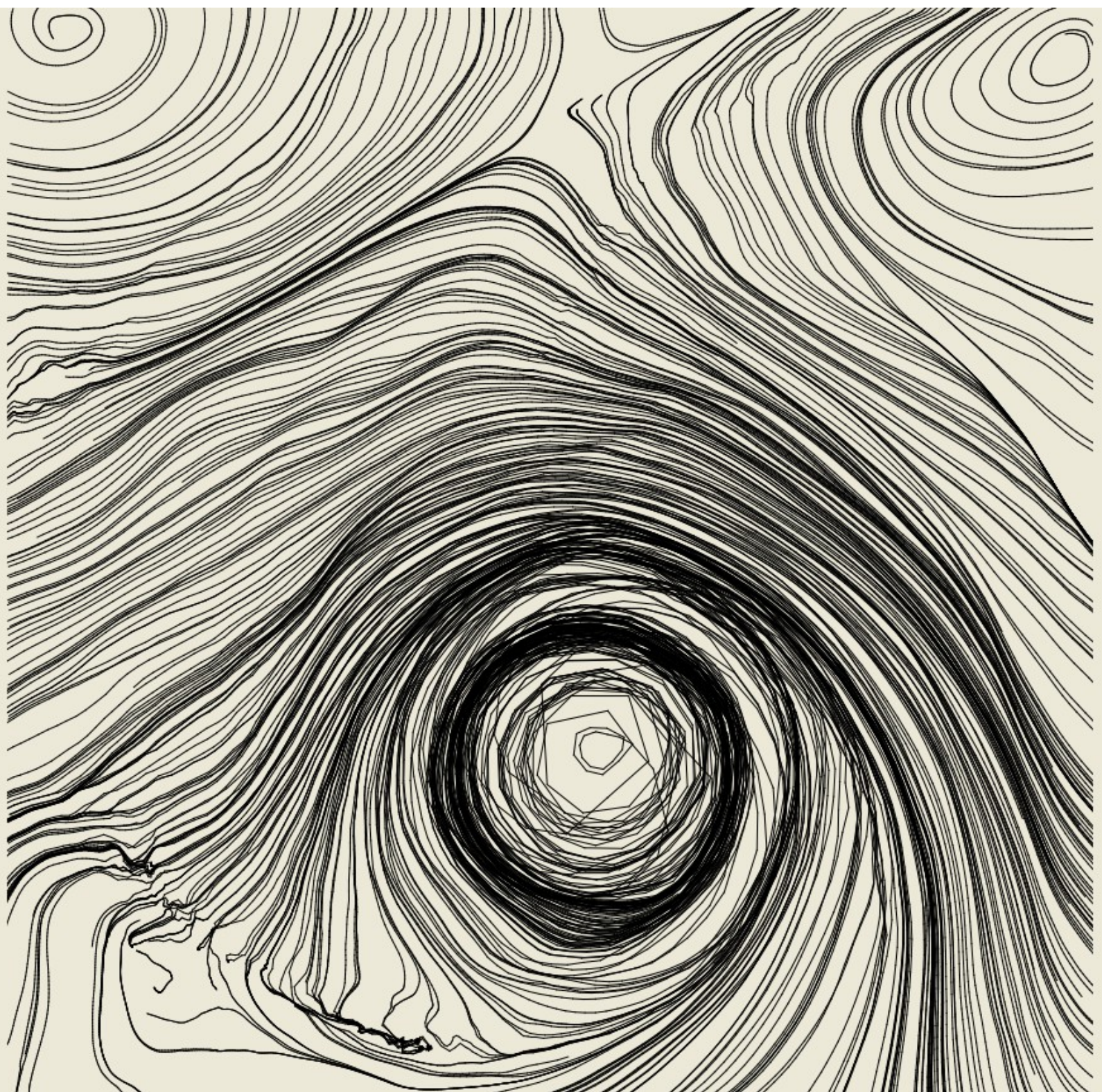
Output

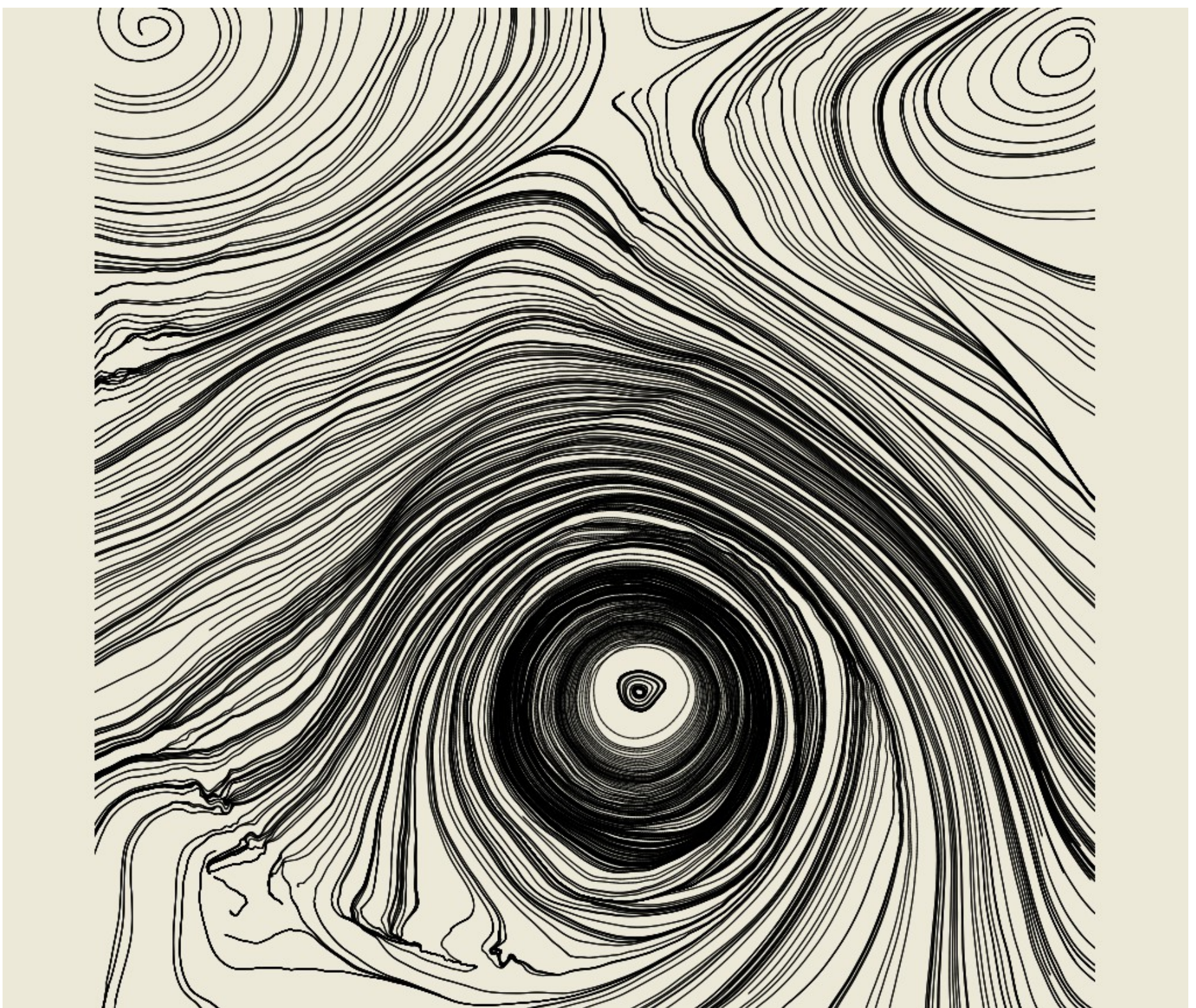


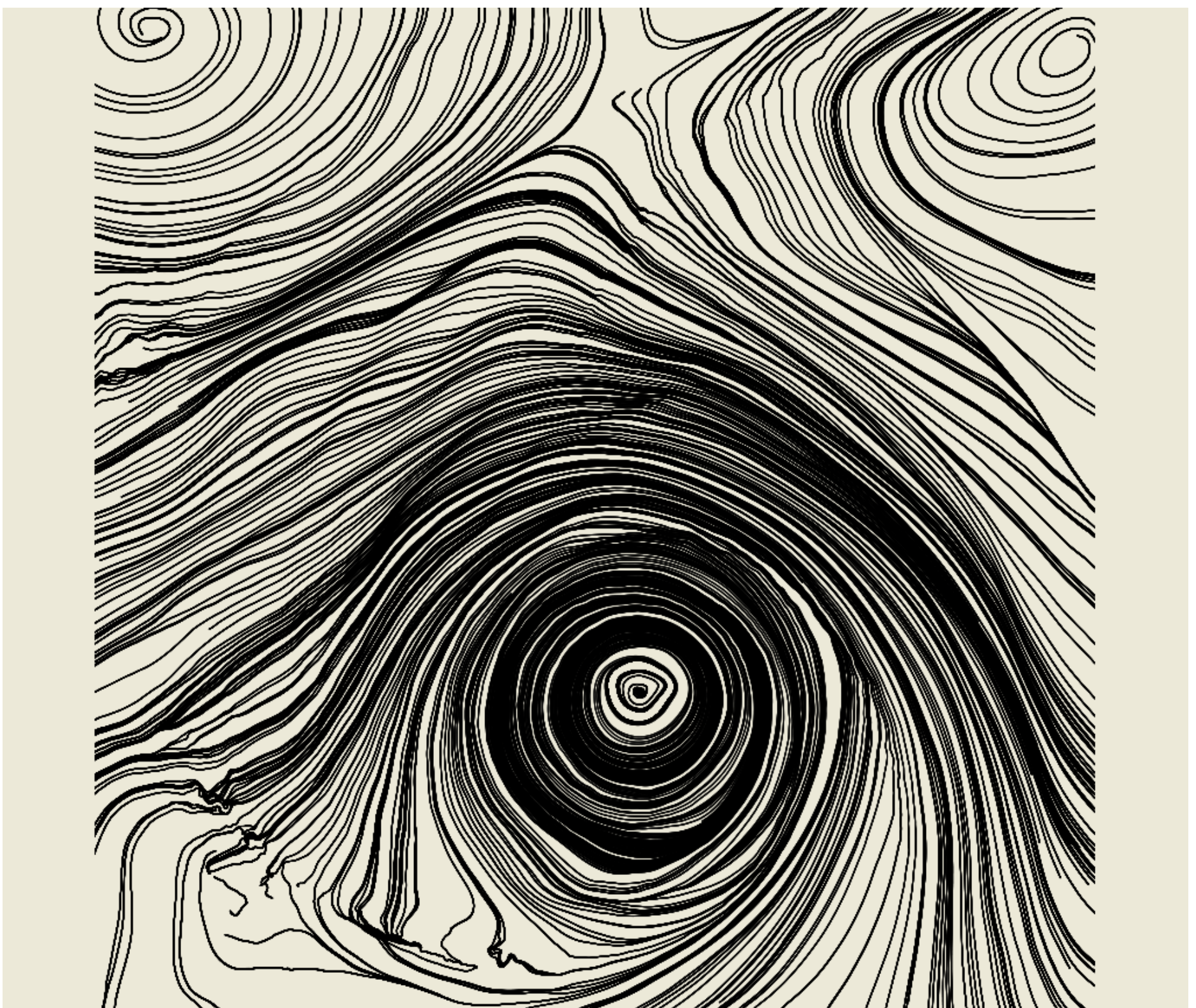




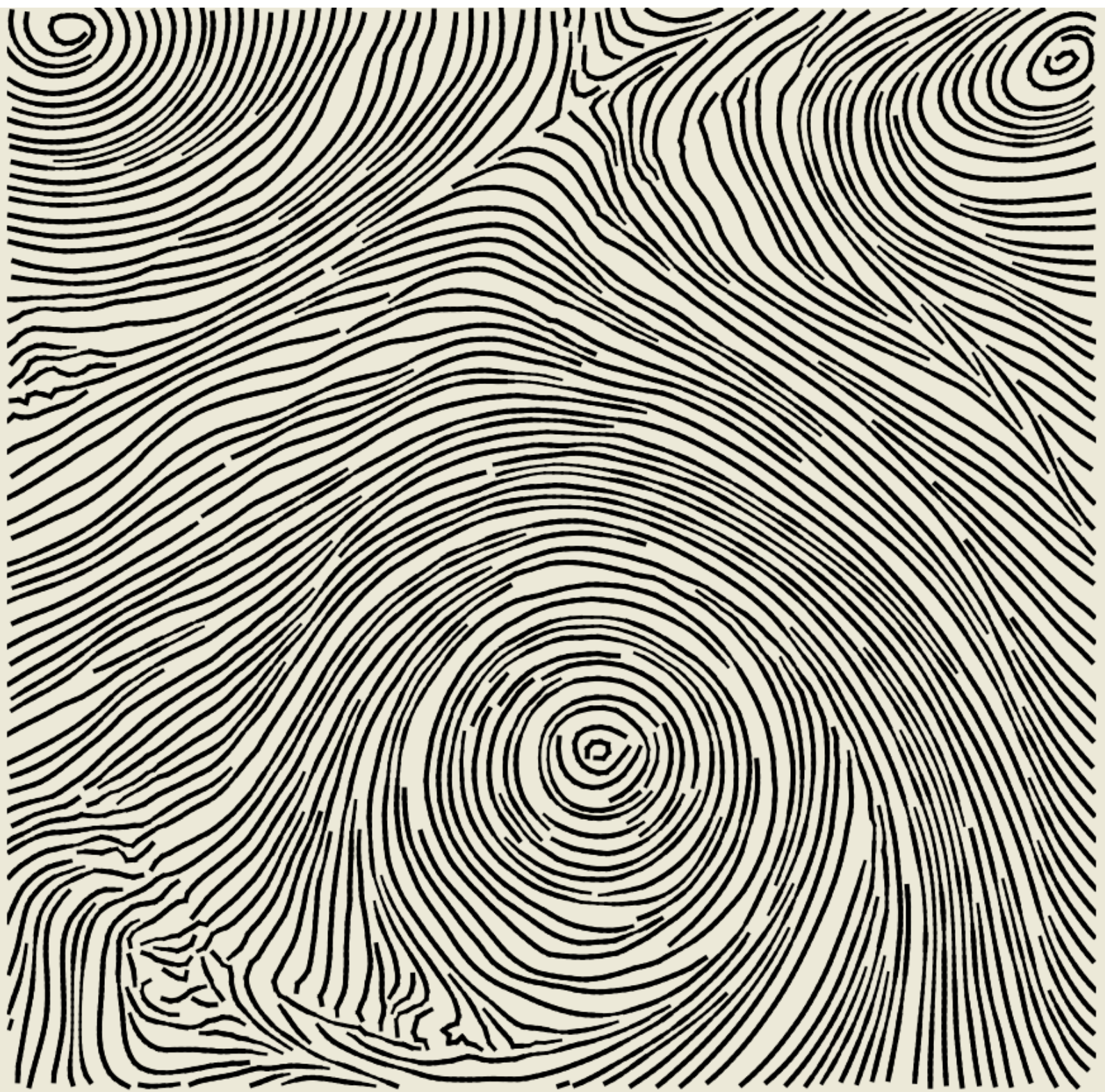


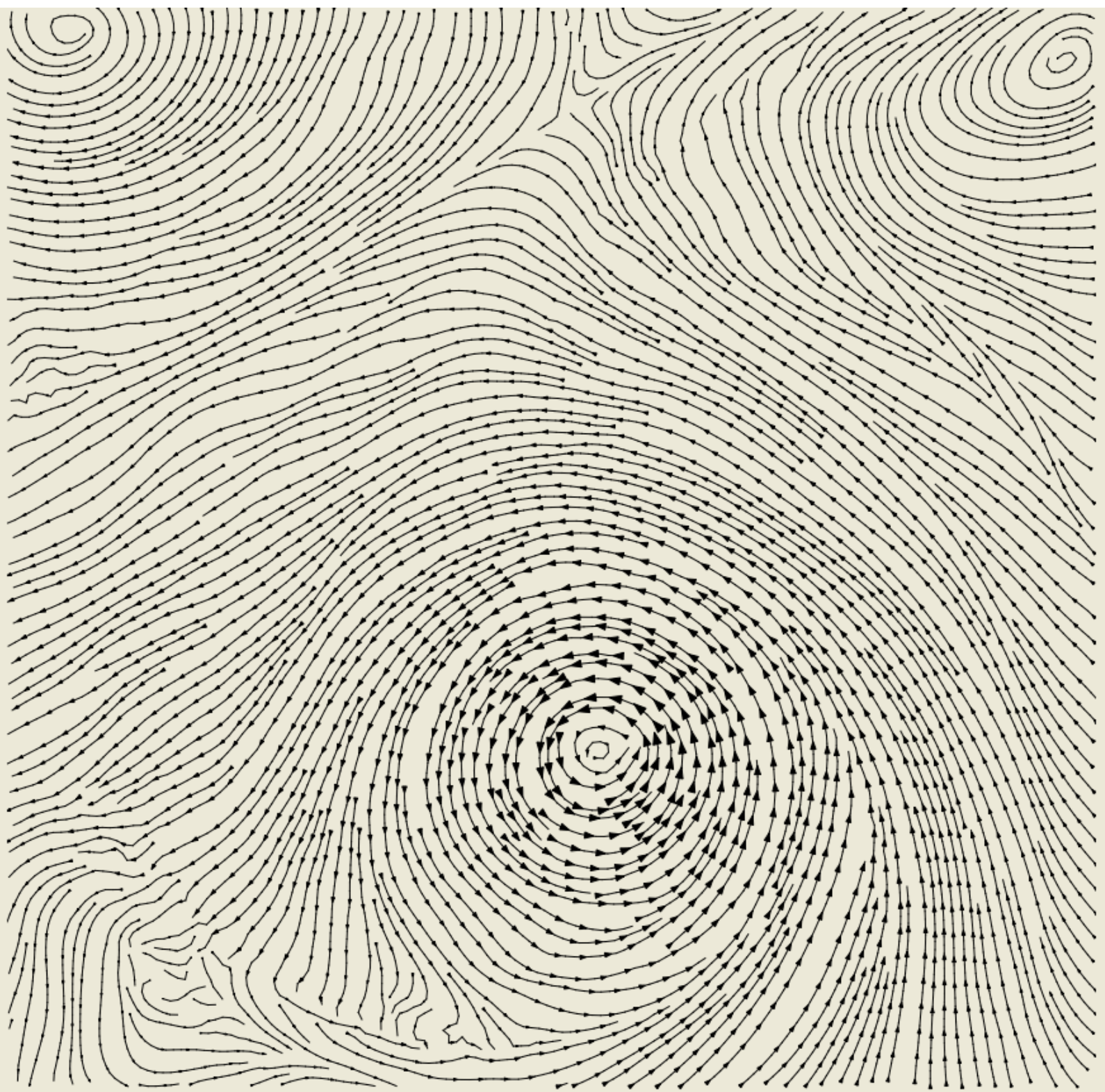












Probleme und Verbesserungen

- Rendergeschwindigkeit
- „Tapering“?

Fragen

