



以隨機雜訊生成循環影像

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大家喜歡 ML 嘽？



放心，這裡沒有
這是資訊組唯一一份沒有 ML 的專題



動機



livity



不舒服 !



常見音樂影片



人工設計

- 麻煩
- 容易無聊



拍攝影片

- 也麻煩
- 有切點
- 也無聊



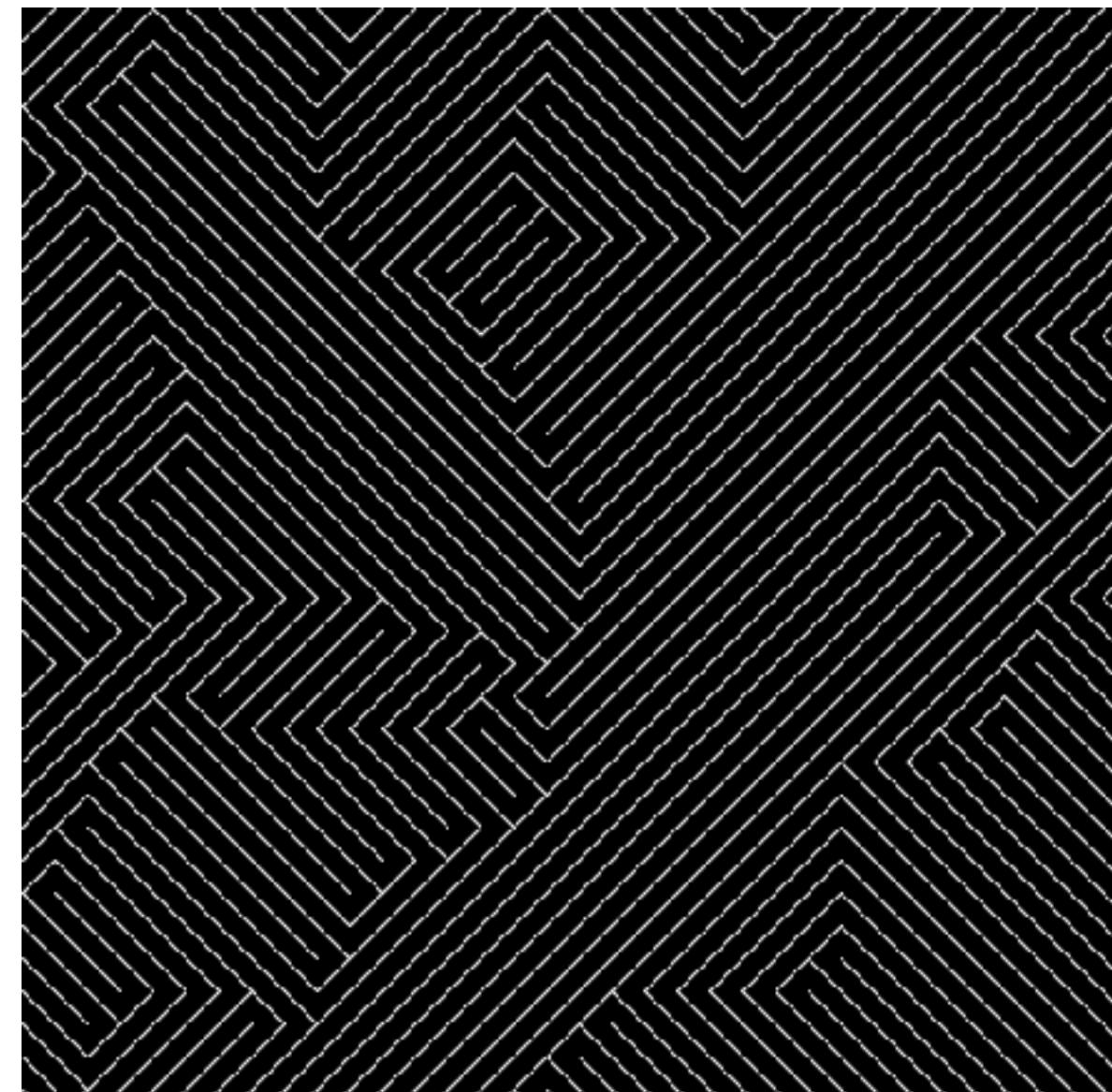
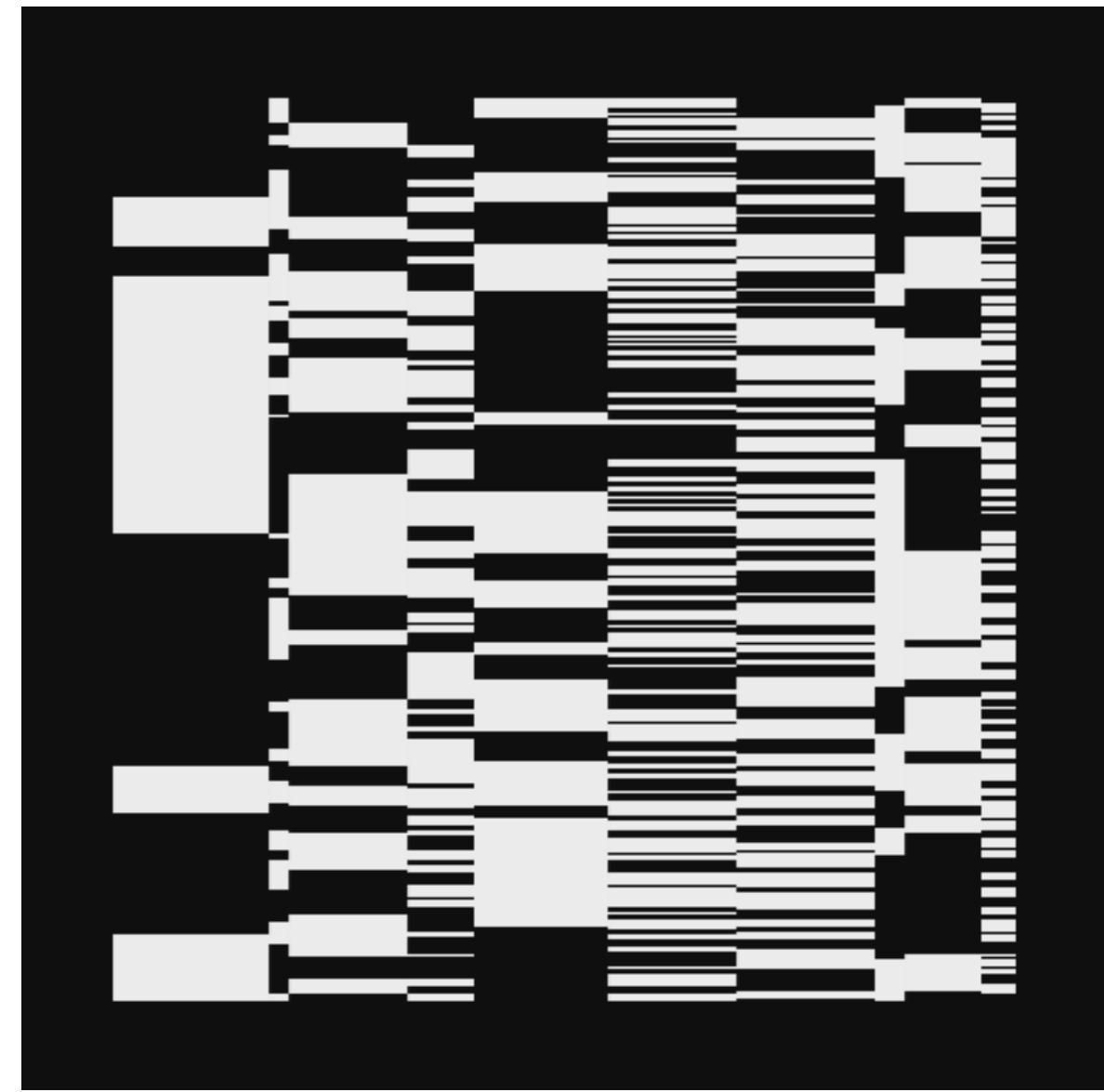
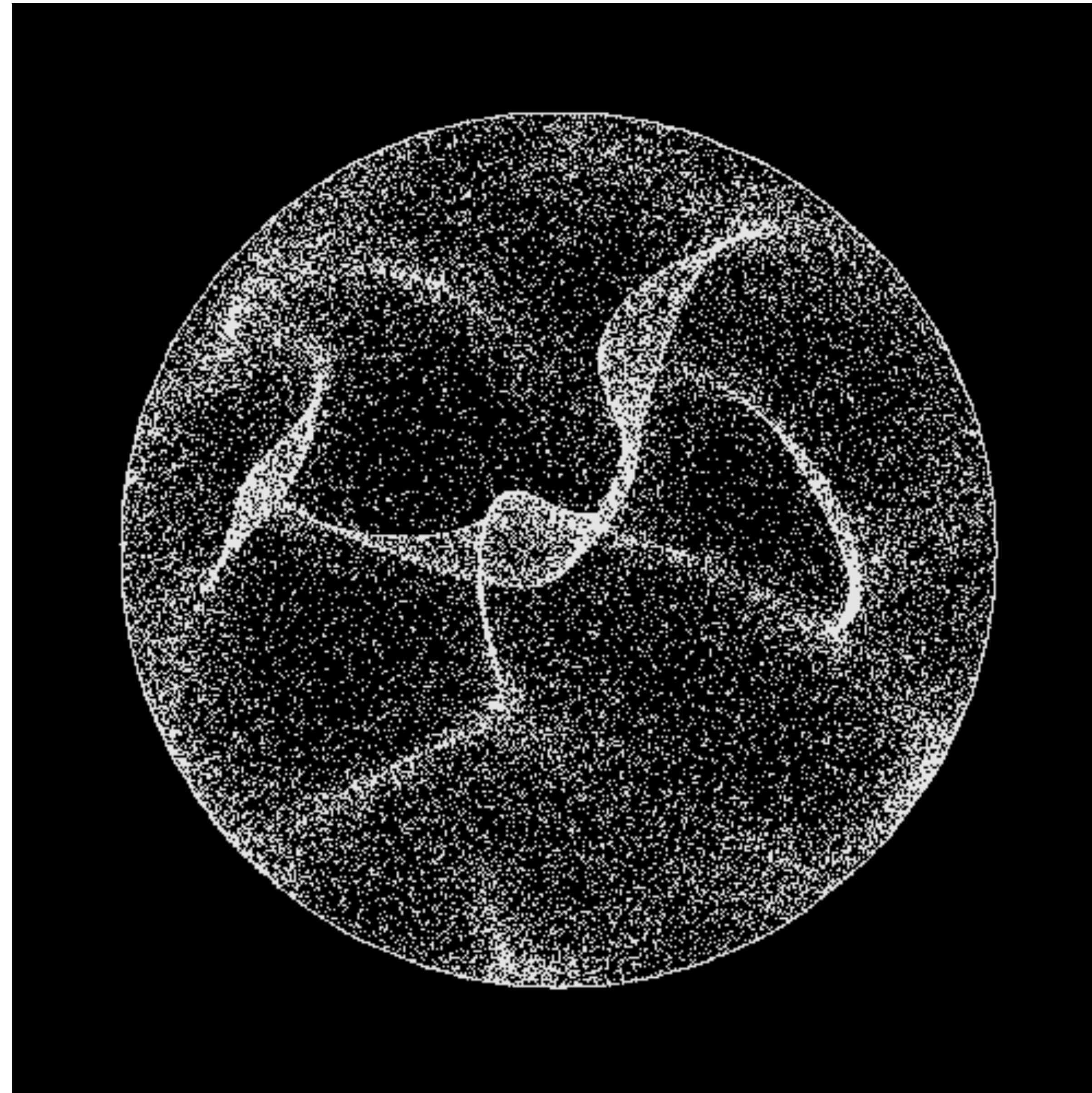
怎麼辦？



怎麼生成循環影像？



• 池田亮司個展



- “Drawing from noise, and then making animated loopy GIFsom there.” by Etienne Jacob



太酷了！



以隨機雜訊生成循環影像！



怎麼做？



“...draw things from noise functions in Processing,
and then will present an automatic way to produce
GIFs that loop well from a noise-based drawing.”

—“Drawing from noise, and then making animated loopy GIFs from there.” by Etienne Jacob



“...draw things from **noise functions** in Processing,
and then will present an automatic way to produce GIFs that
loop well from a **noise-based drawing**.”

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Noise?



梯度雜訊

Gradient Noise

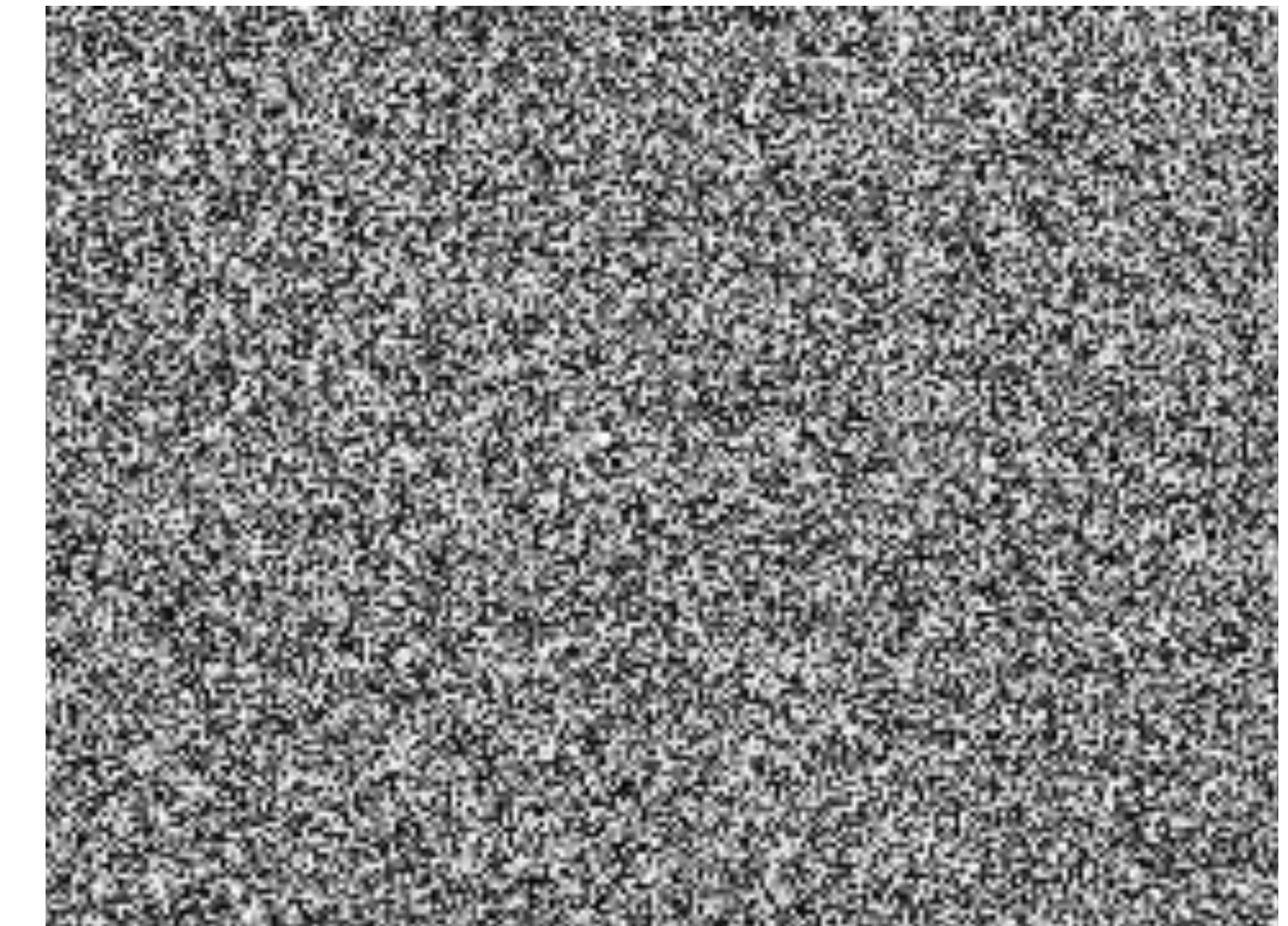


當輸入相近的時候，
輸出也會相近。

梯度雜訊 Gradient Noise

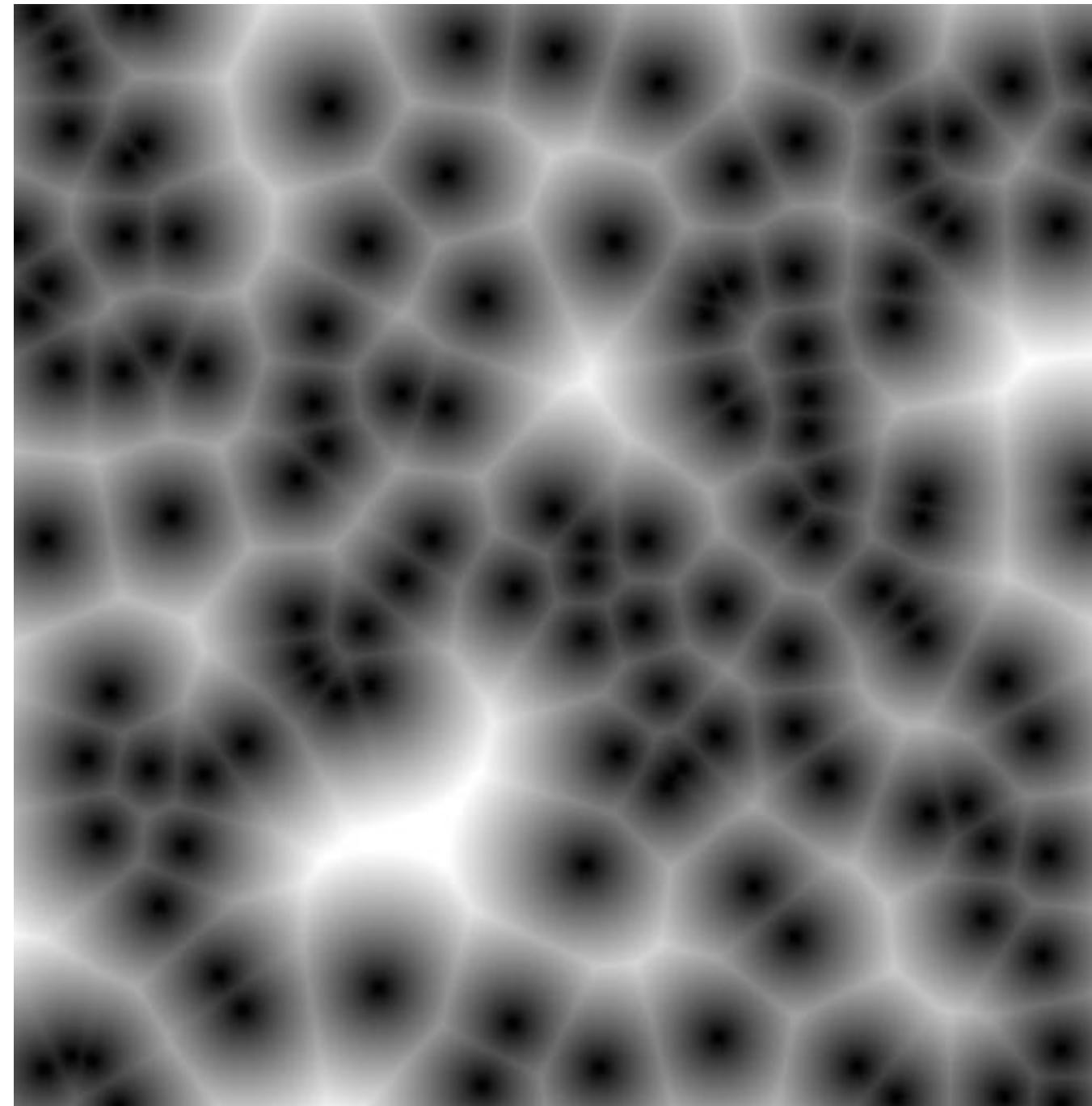


梯度雜訊
連續、平滑



一般隨機
不連續、粗糙

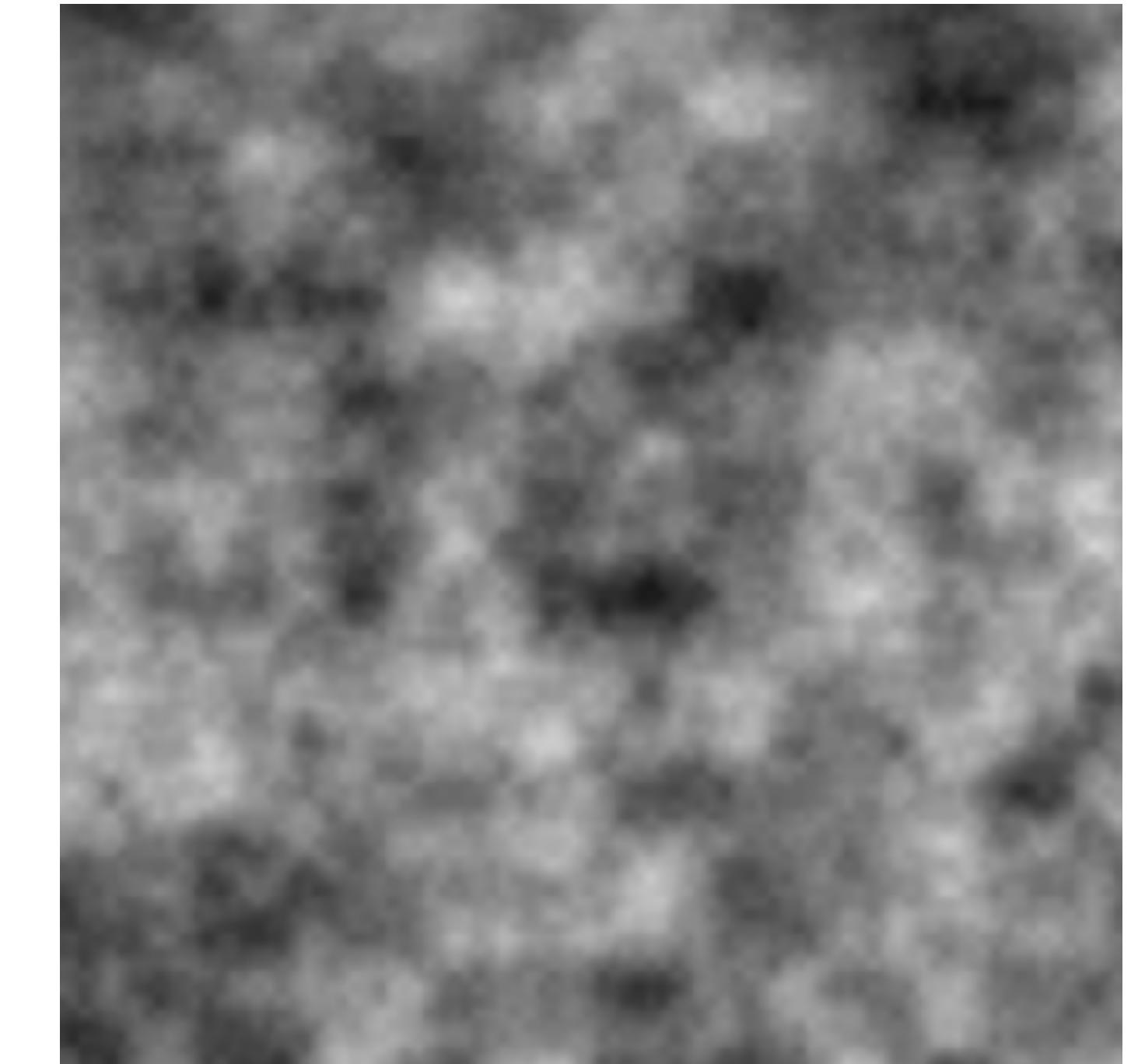
梯度雜訊 Gradient Noise



Worley Noise



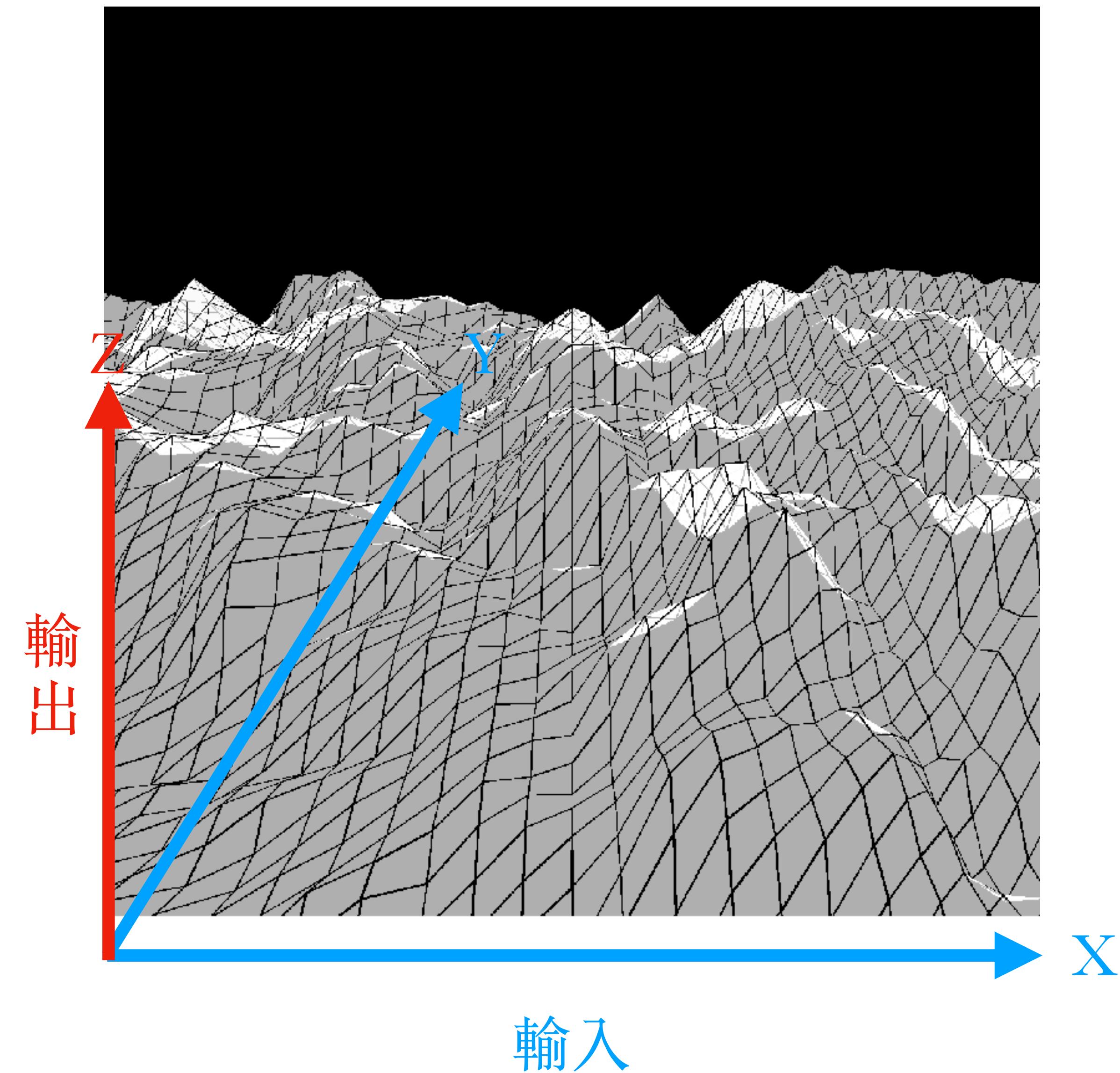
Simplex Noise



Perlin Noise

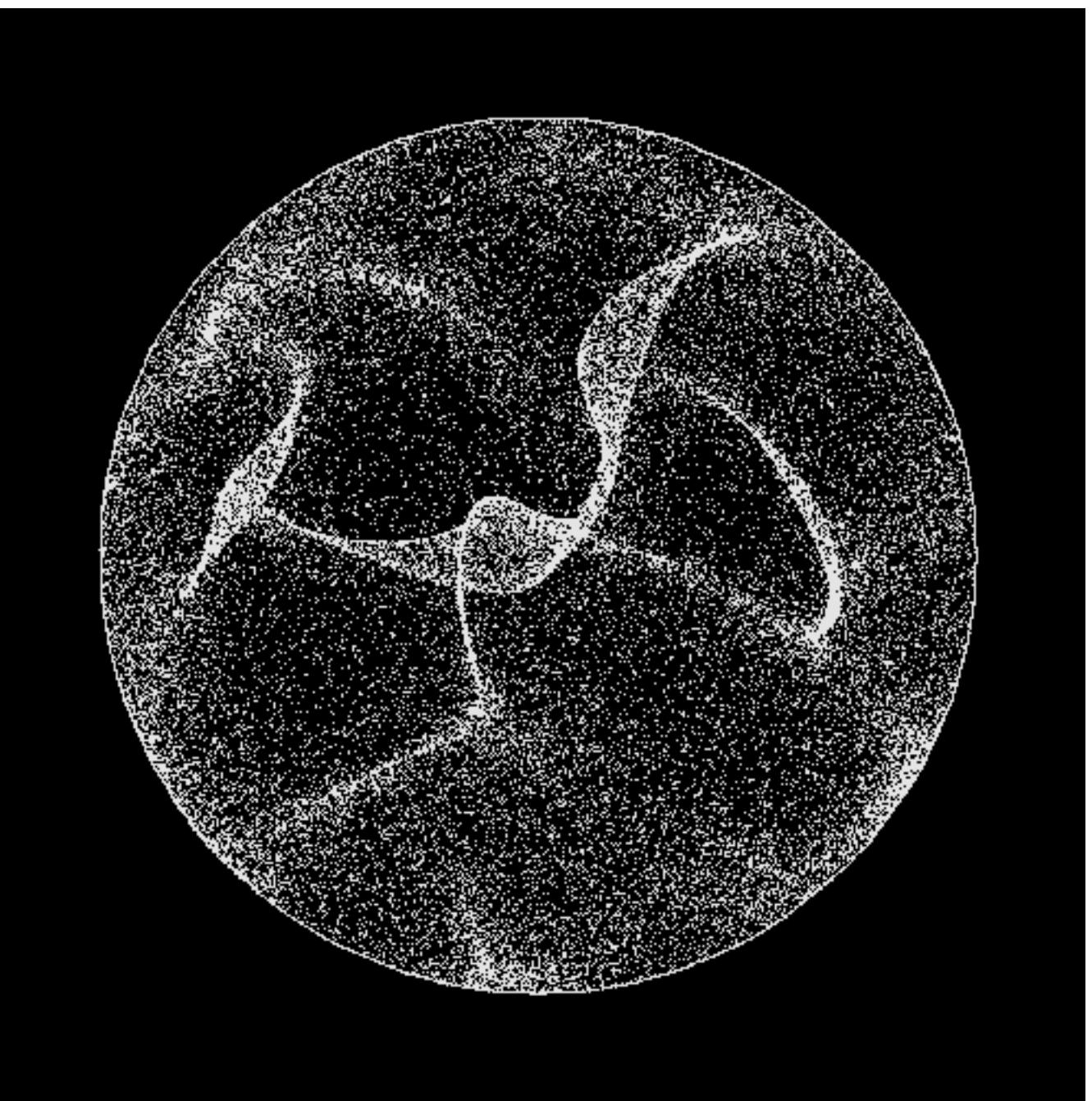
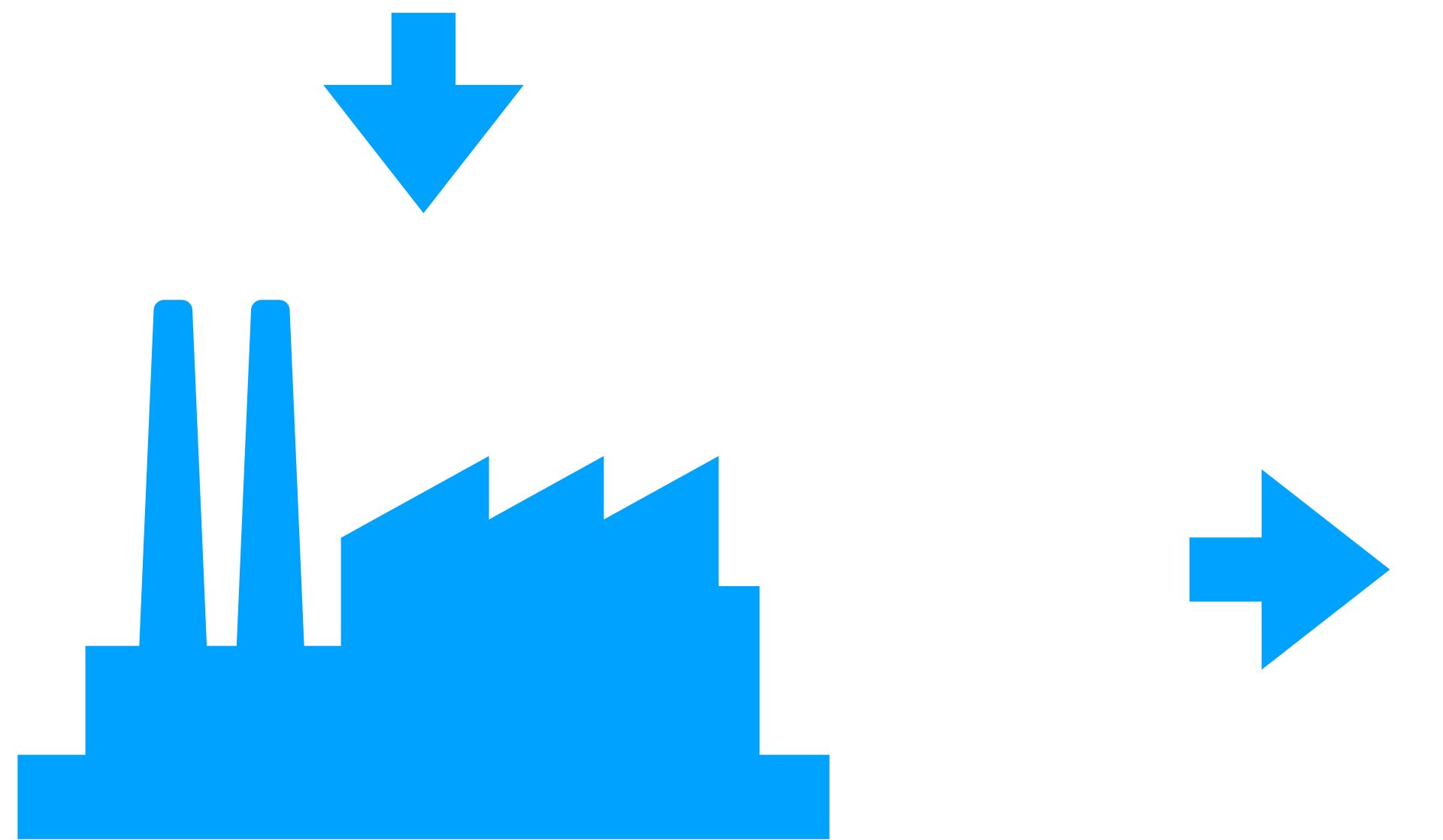


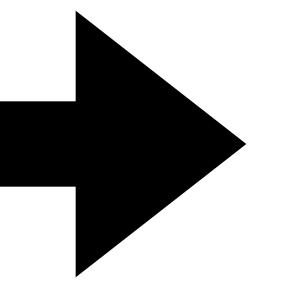
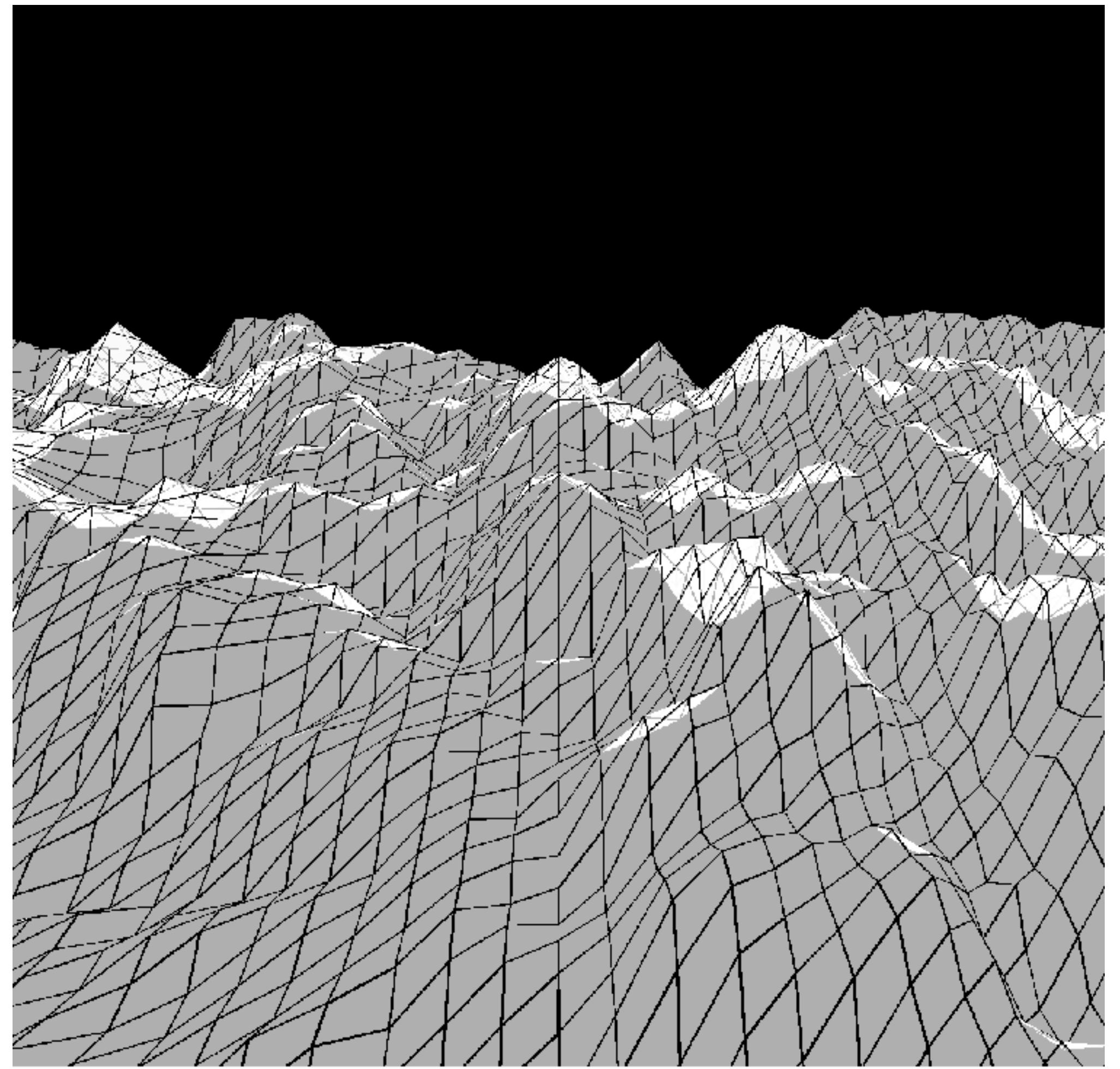
運作方式





輸出 Z



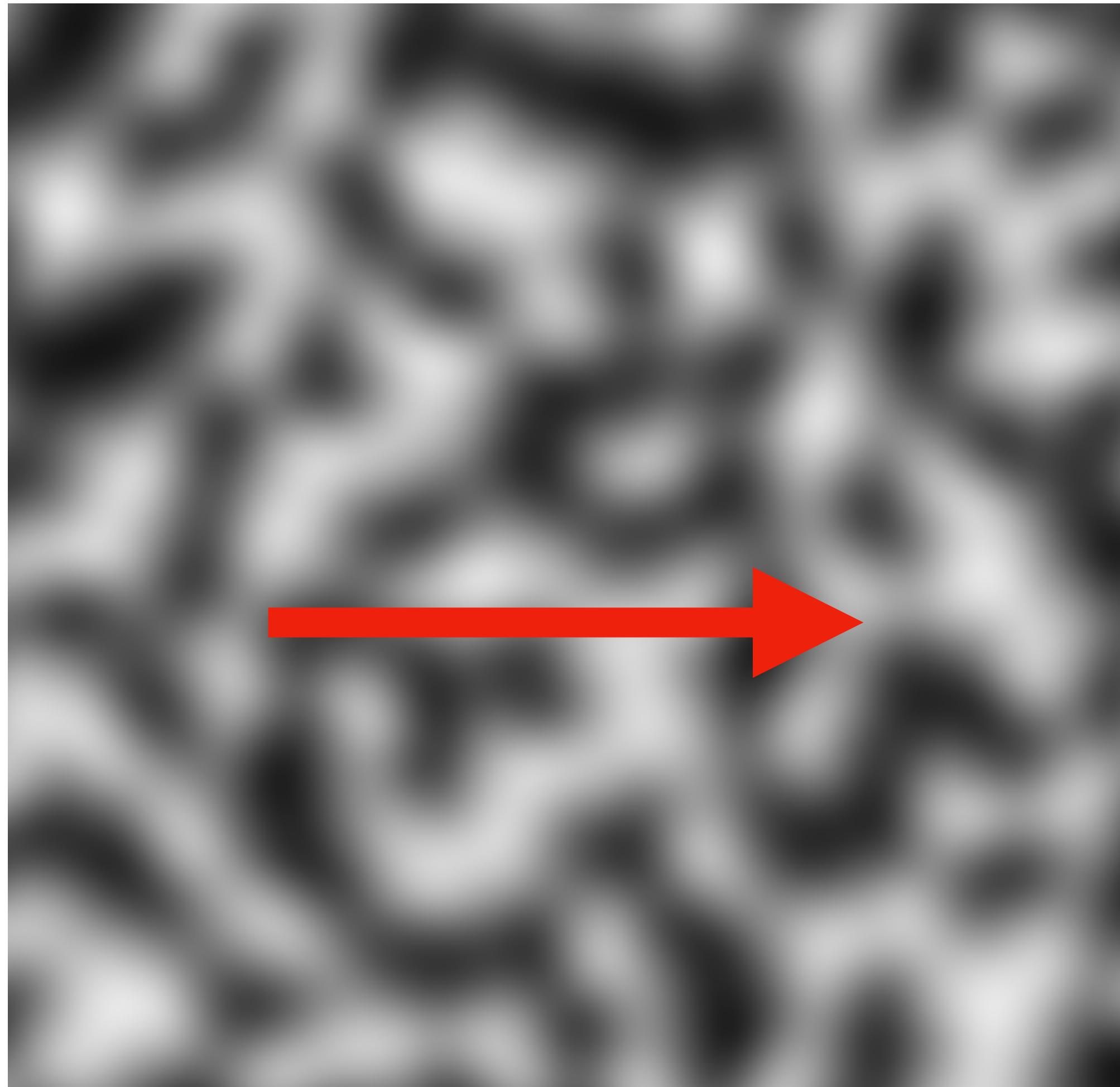




隨機連續影像



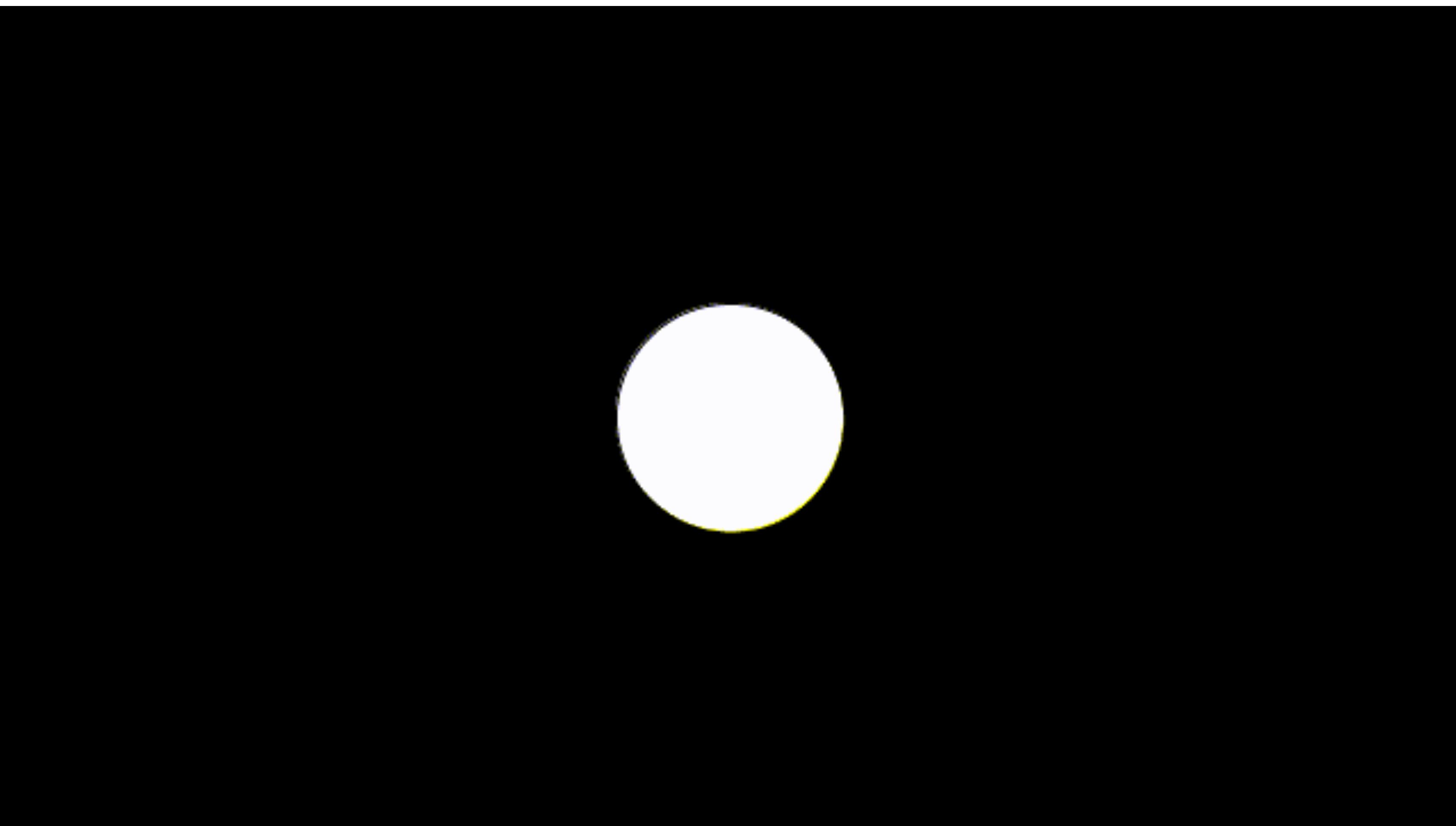
Serendipity



走過去！



Serendipity





循環呢？



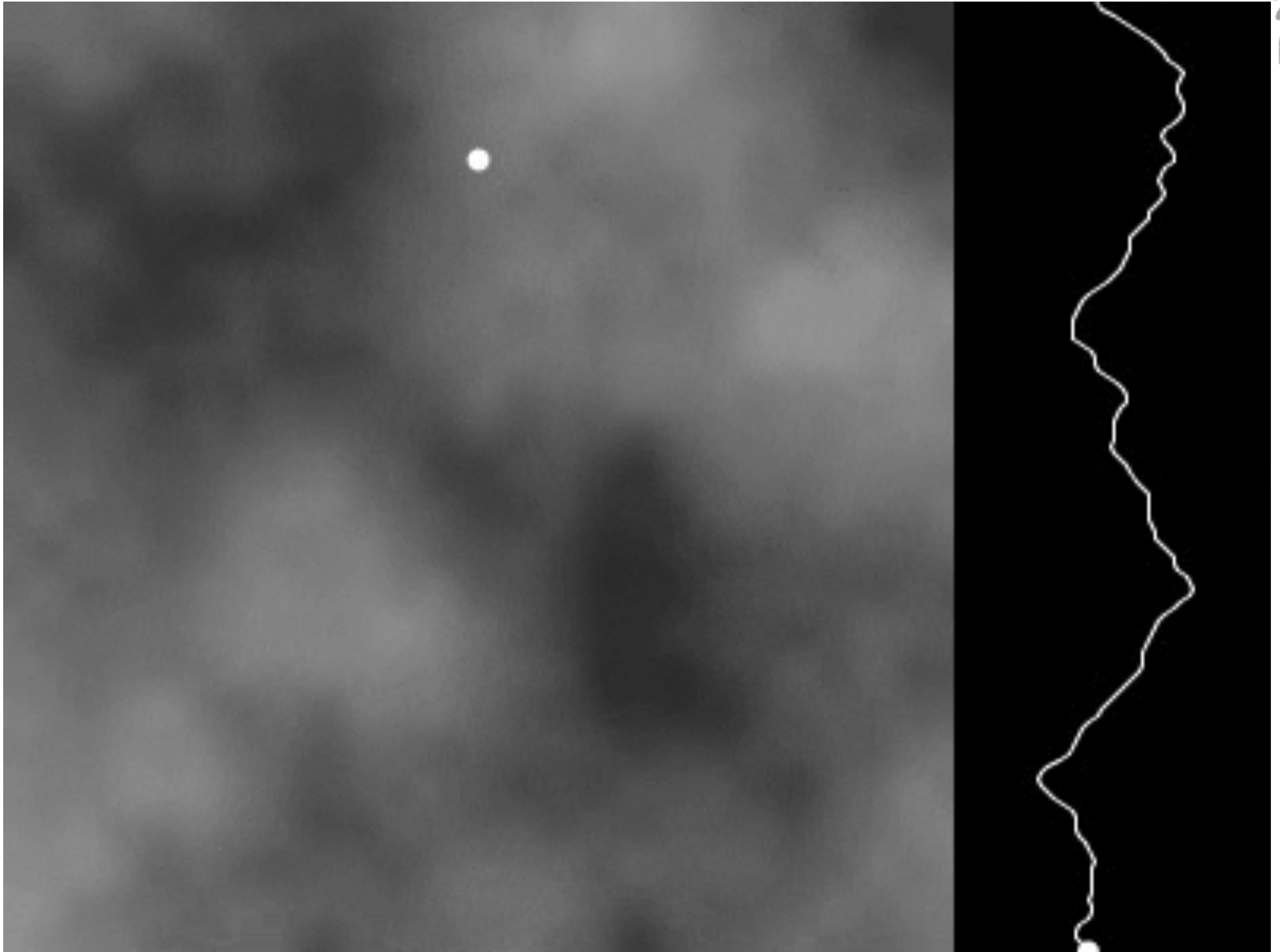
頭接尾！



Serendipity



路徑頭接尾！



Serendipity

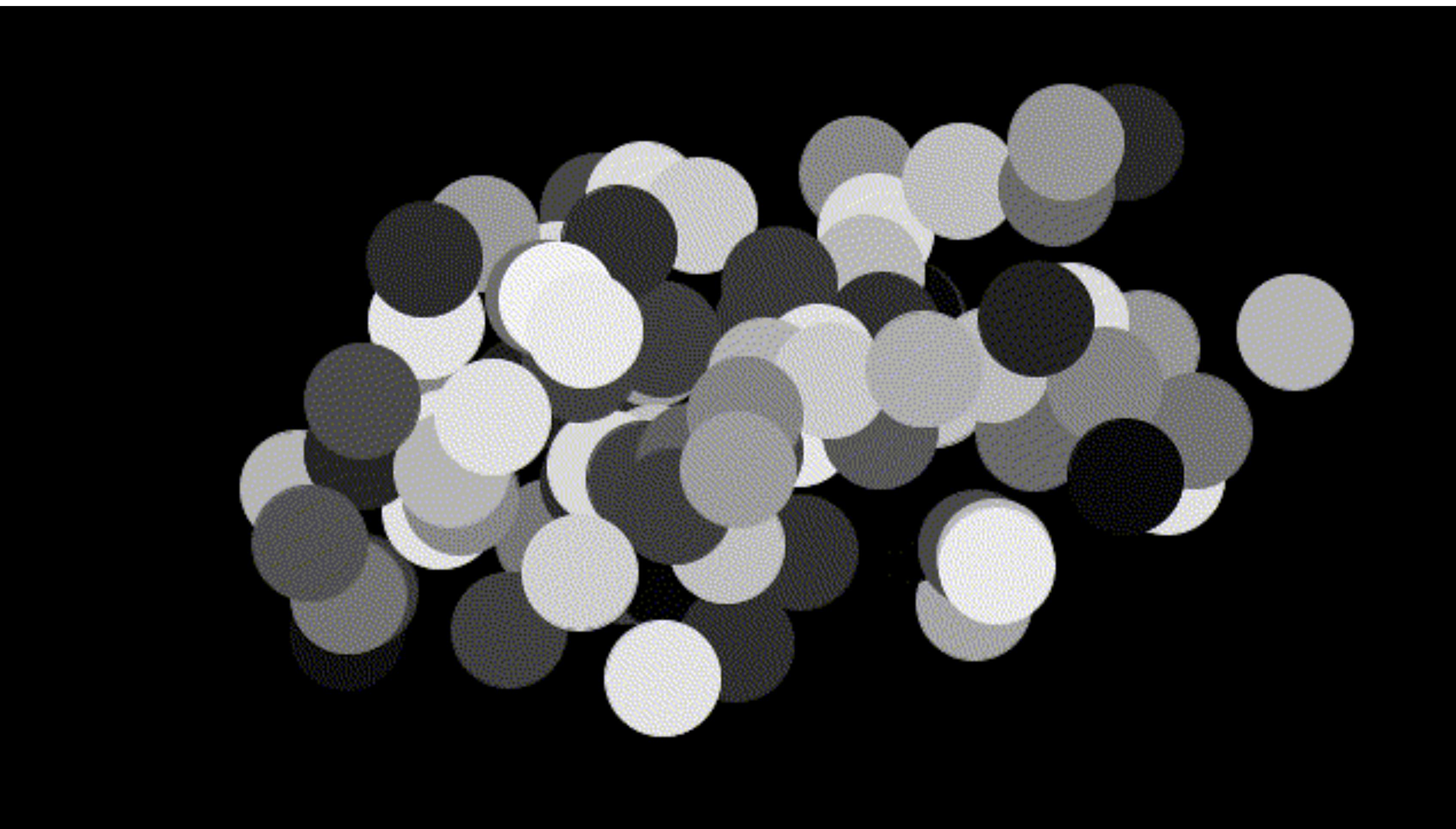


Serendipity



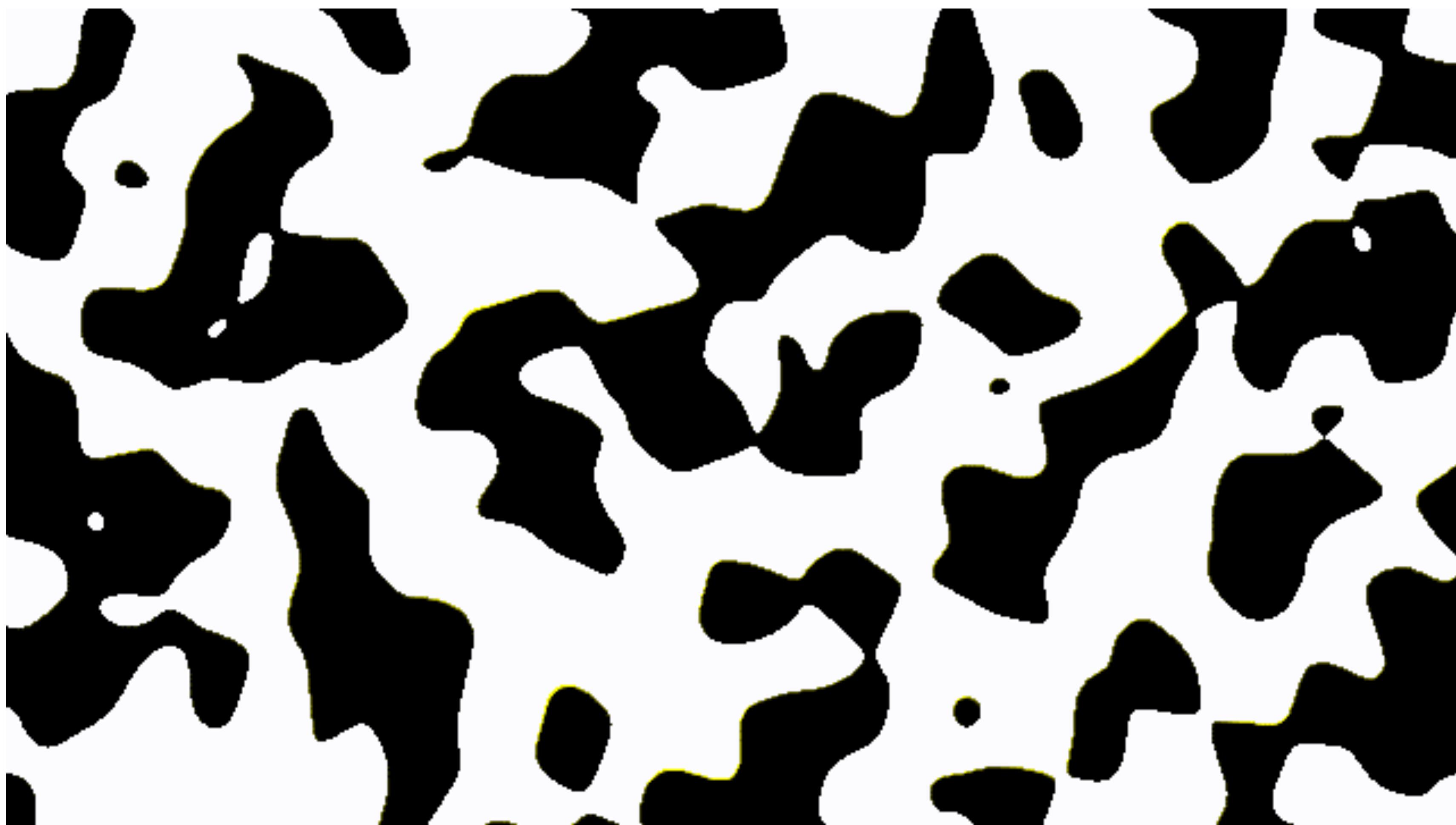


Serendipity





Serendipity

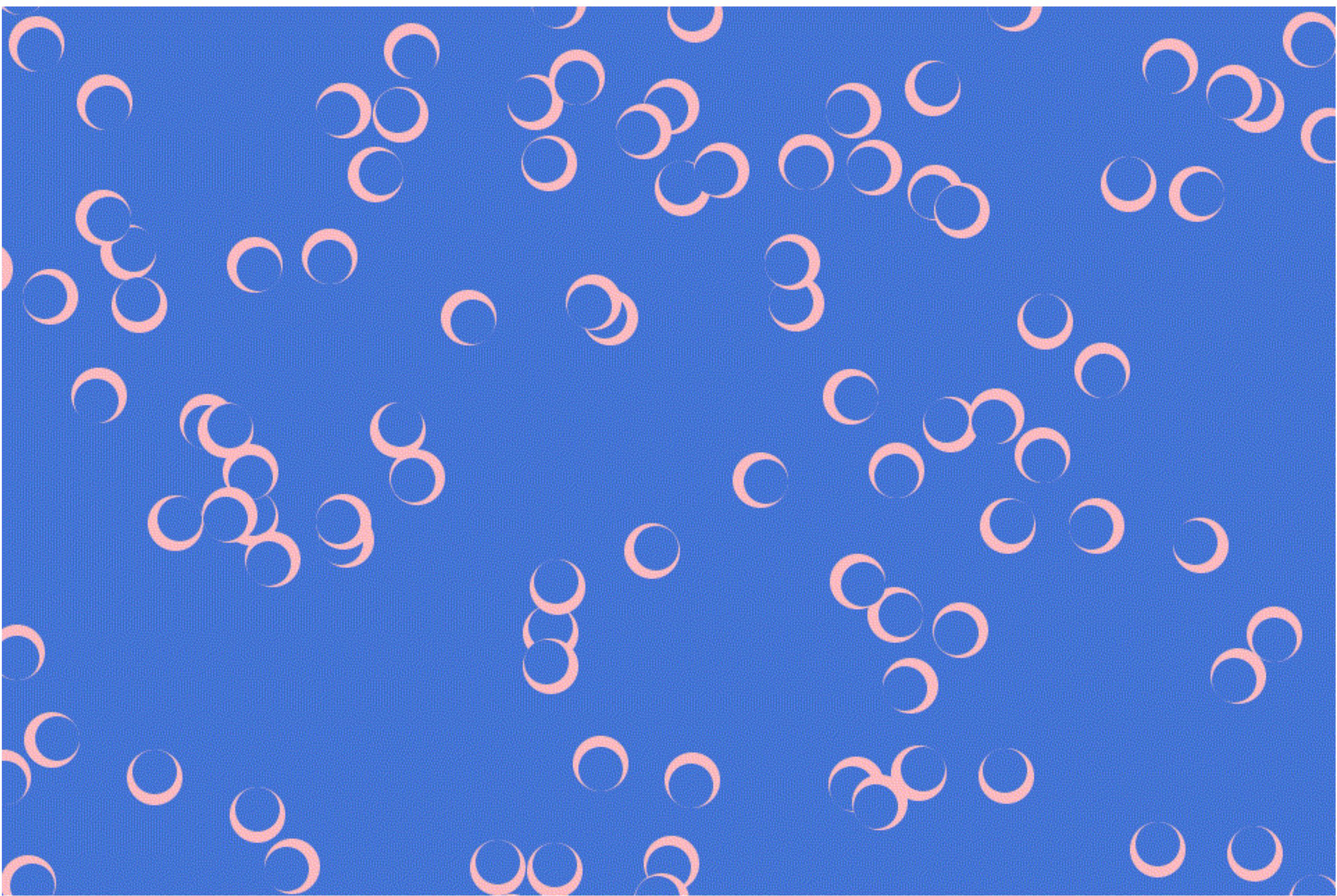


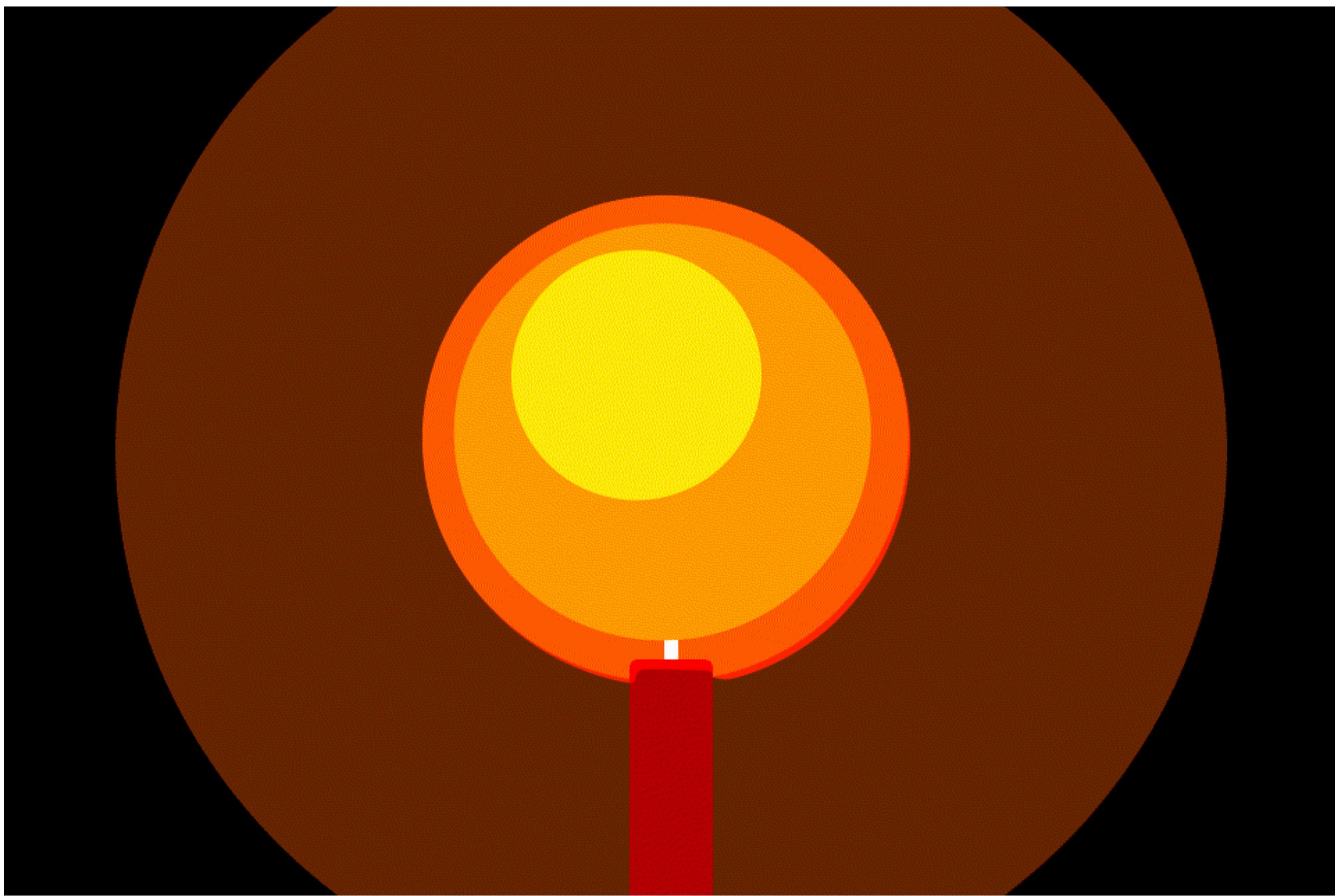


產生漂亮（大概吧）的影像



Serendipity







收穫



未來展望



未來展望



- 結合 3D 渲染
- 嘗試使用不同噪音
- 產出漂亮的影像



參考資料 & 作品欣賞

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- “Drawing from noise, and then making animated loopy GIFs from there.”
by Etienne Jacob
- @beesandbombs on twitter
- 池田亮司個展

隰有萇楚

隰有萇楚

猗儻其枝

夭之沃沃

樂子之無知



隰有萇楚

隰有萇楚

猗儻其華

夭之沃沃

樂子之無家



隰有萇楚

隰有萇楚
猗儺其實
夭之沃沃
樂子之無室

