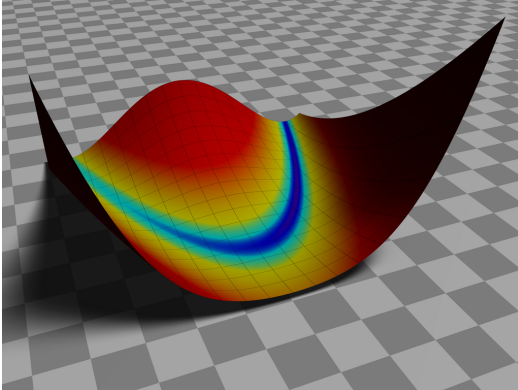


# Infill

## Lecture 33

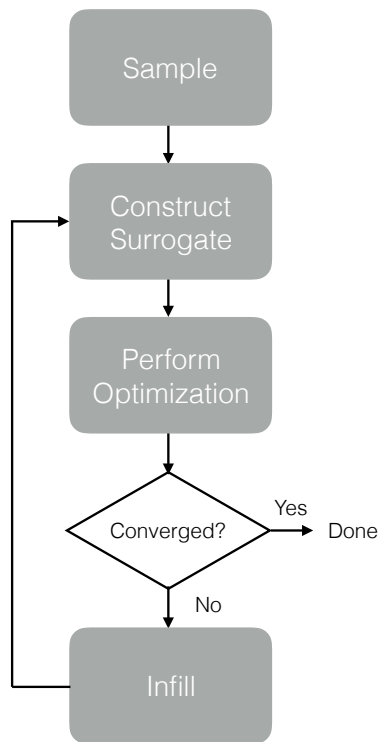


ME EN 575  
Andrew Ning  
[aning@byu.edu](mailto:aning@byu.edu)

## Outline

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Two main approaches:

- Prediction Based Exploitation
- Error Based Exploration

## Exploitation

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Apply infill points at the “optimal” point as predicted by the surrogate.

This allows for quick convergence, but may be less desirable if you expect to have multiple local optimum.

# Exploration

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Requires error estimates.

We don't want to just sample where mean is low (basically same as exploitation), but we also don't want to just sample where error is high (basically just a larger sampling plan).

We want to use a better metric like: Expected Improvement.

See 1dsbo.key.