

# Infinite Simplices: An Excursion into Simplicial Sets

Research Sharing Luncheon

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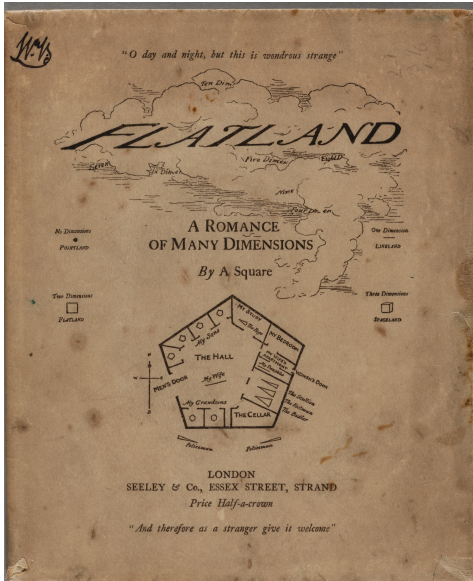
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# Outline

- Hypergraphs
- Simplicial Sets
- Synthesis

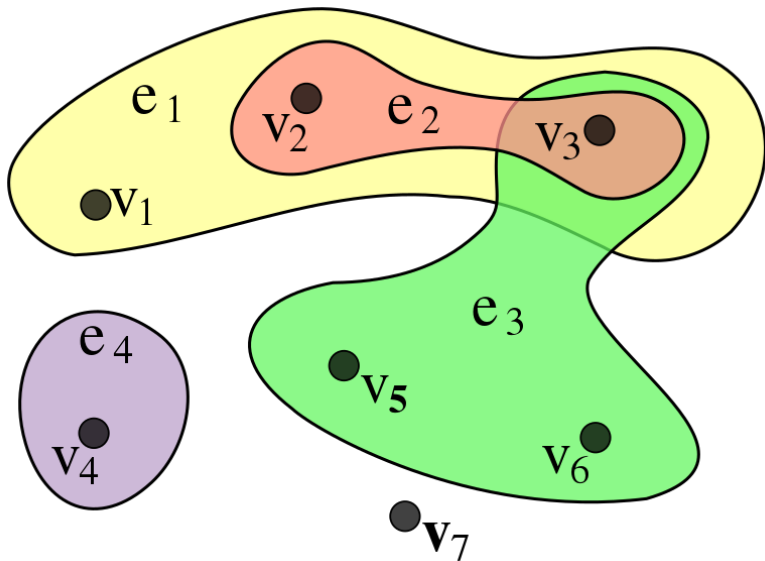
# Flatland by Edwin Abbott



Picture: Wikipedia

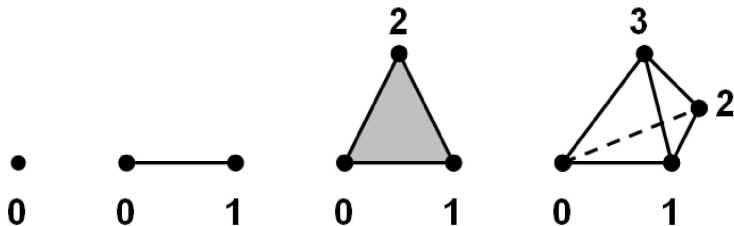
# Graph

# Hypergraph



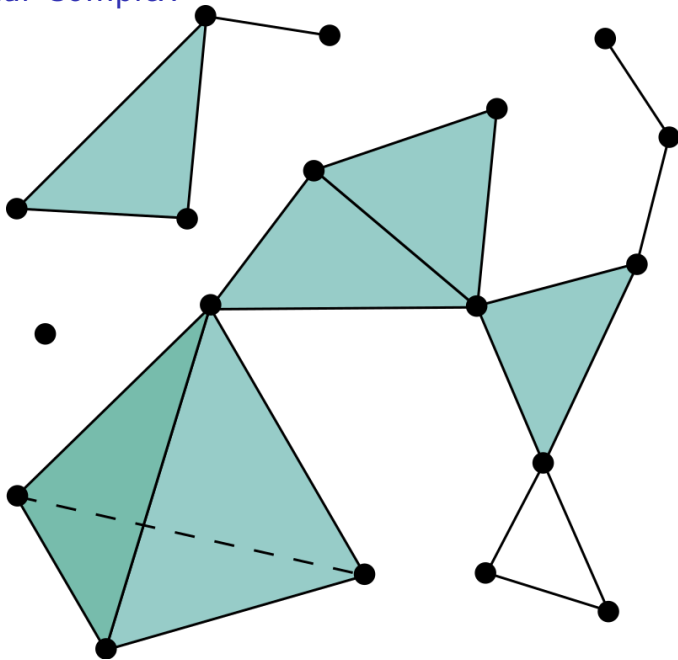
Picture: Wikipedia Creative Commons

# Standard simplices

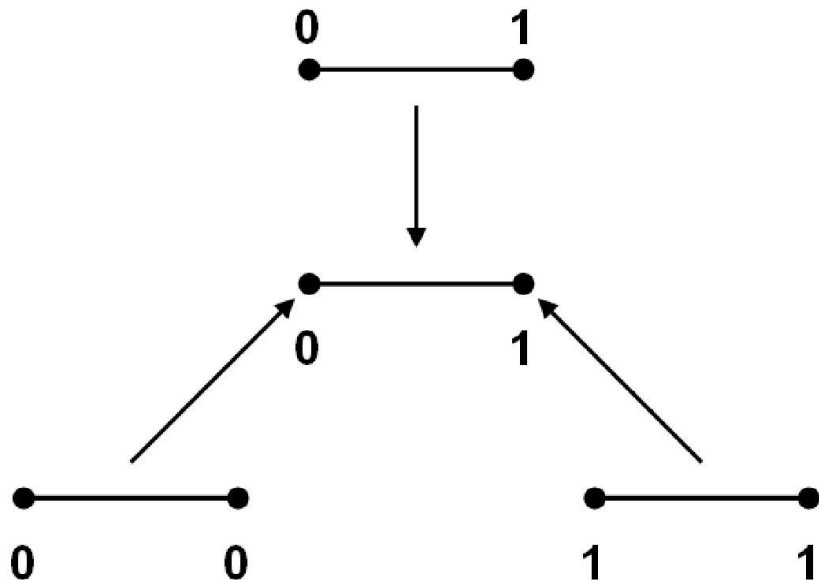


Picture: Friedman, Greg. "Survey article: an elementary illustrated introduction to simplicial sets." *The Rocky Mountain Journal of Mathematics* (2012): 353-423.

# Simplicial Complex

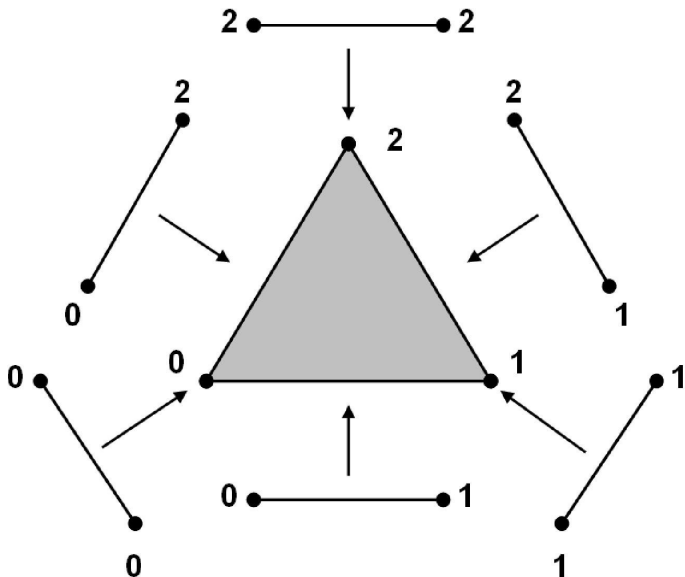


# 1-simplex $[0,1]$ Expanded Edition

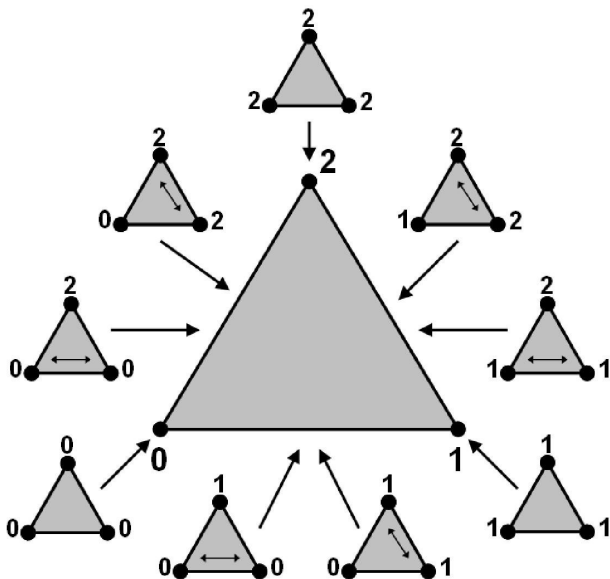




## 2-simplex $[0,1,2]$ Expanded Edition



## 2-simplex $[0,1,2]$ Expanded Edition ctd



# Hereon..

- Machine Learning with Simplicial Sets

# Hereon..

- Machine Learning with Simplicial Sets
- Model misinformation?