

# Typical Graph Processing Application

- Works in *iterations*
- Each vertex assigned a *value*
- In each iteration, each vertex:
  1. Gather: Gathers values from its immediate neighbors (vertices who join it directly with an edge). E.g., @A:  $B \rightarrow A$ ,  $C \rightarrow A$ ,  $D \rightarrow A, \dots$
  2. Apply: Does some computation using its own value and its neighbors values.
  3. Scatter: Updates its new value and sends it out to its neighboring vertices. E.g.,  $A \rightarrow B$ ,  $C$ ,  $D$ ,  $E$
- Graph processing terminates after: i) fixed iterations, or ii) vertices stop changing values

