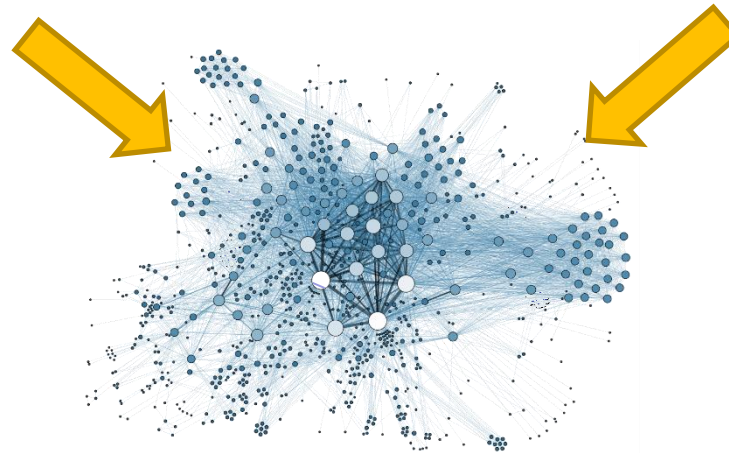


Taming Graph Dynamics at Scale

Felix Cuadrado

Tracking interactions



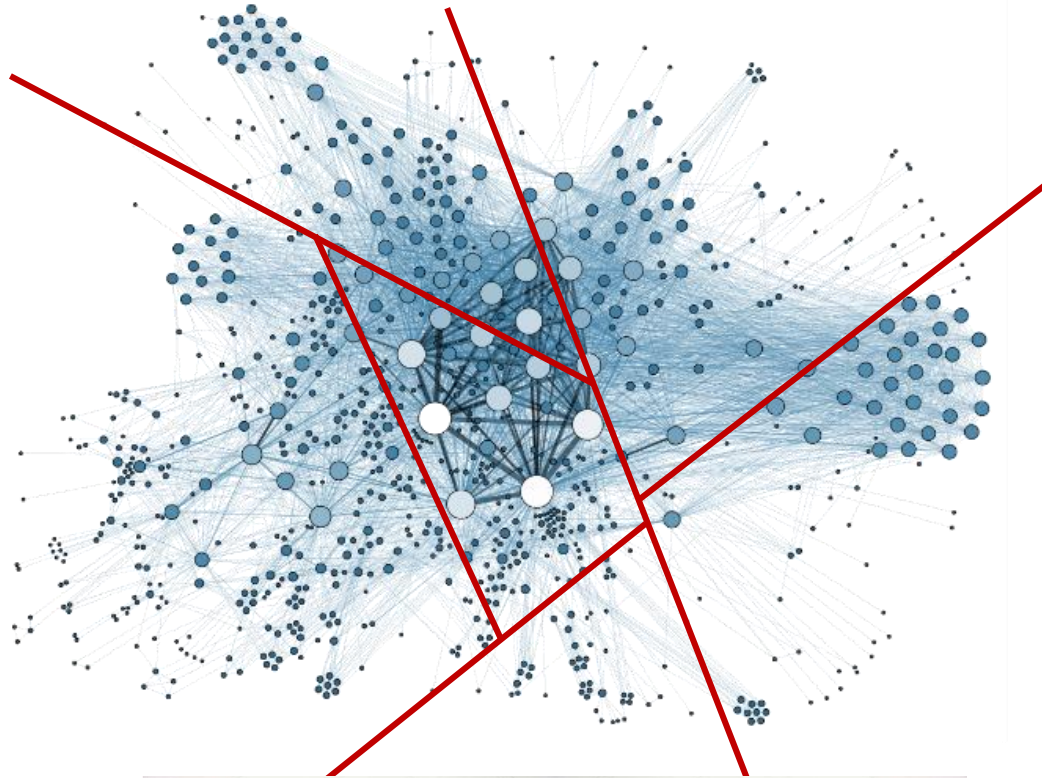
Graphs model
interactions

Graph **size grows**
with input data

Tracking interactions at a large scale

Big Data for Graph Processing

Graph
Partitions



Distributed
computation

Graphs model
interactions



Graph **size grows**
with input data

Temporal interactions: **What?**

Dynamic Graphs

Analyse interaction
Changes



Temporal interactions: **What for?**

Real time: before it happens



Temporal interactions: **Challenges**

Snapshot graph processing



Changes create **performance** problems



No way to query the **past**

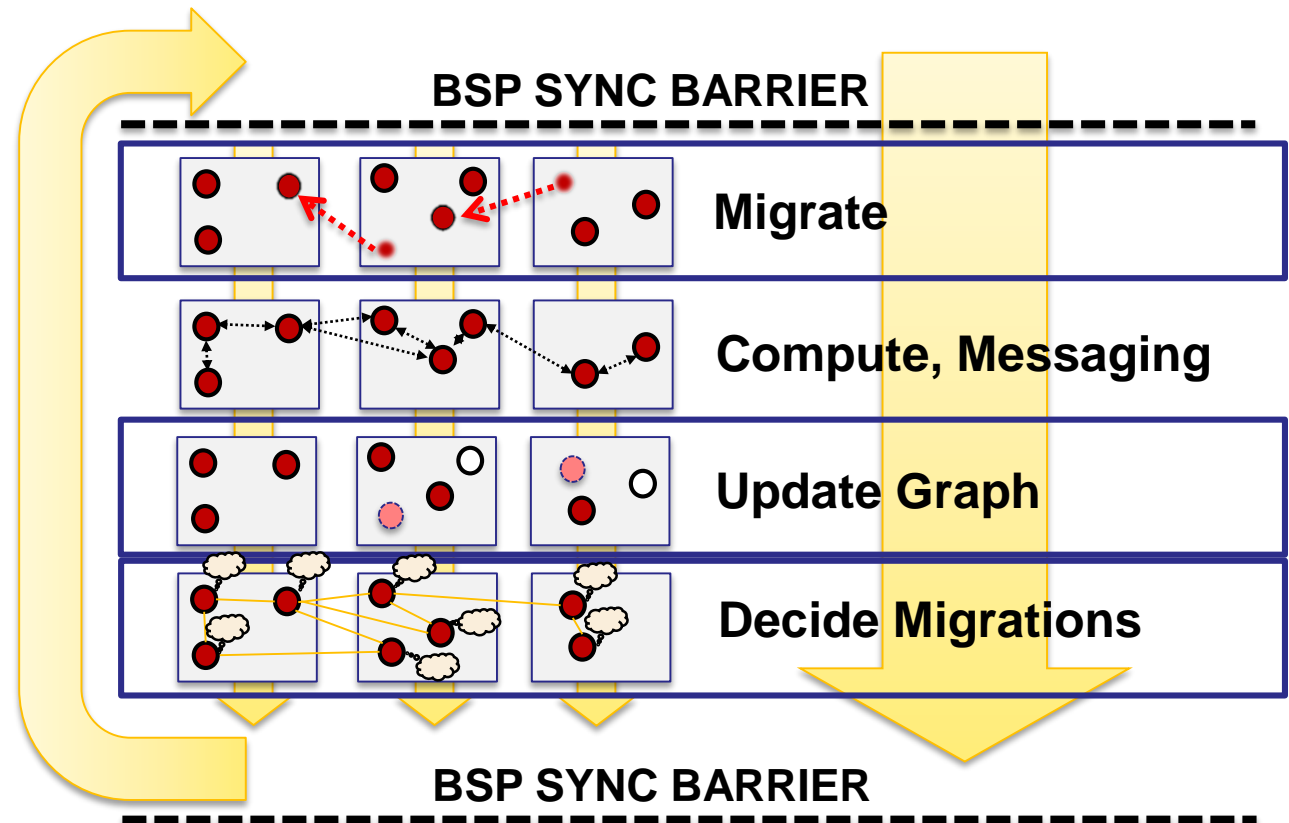


Migration in large-scale dynamic graphs

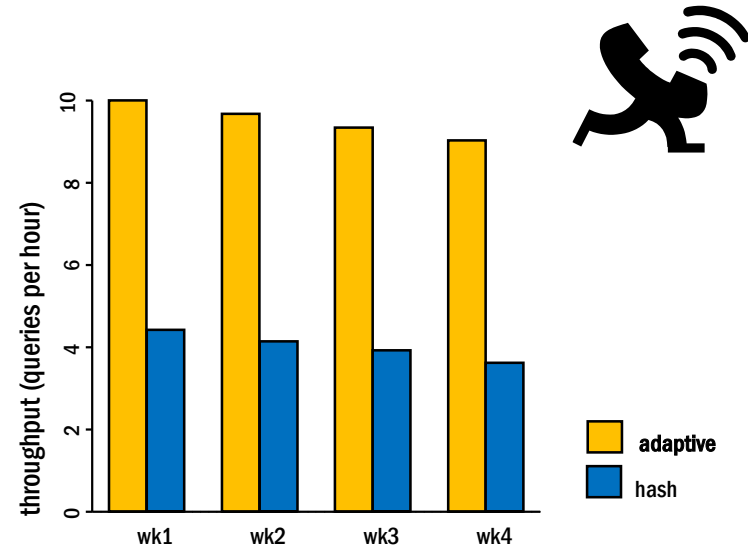
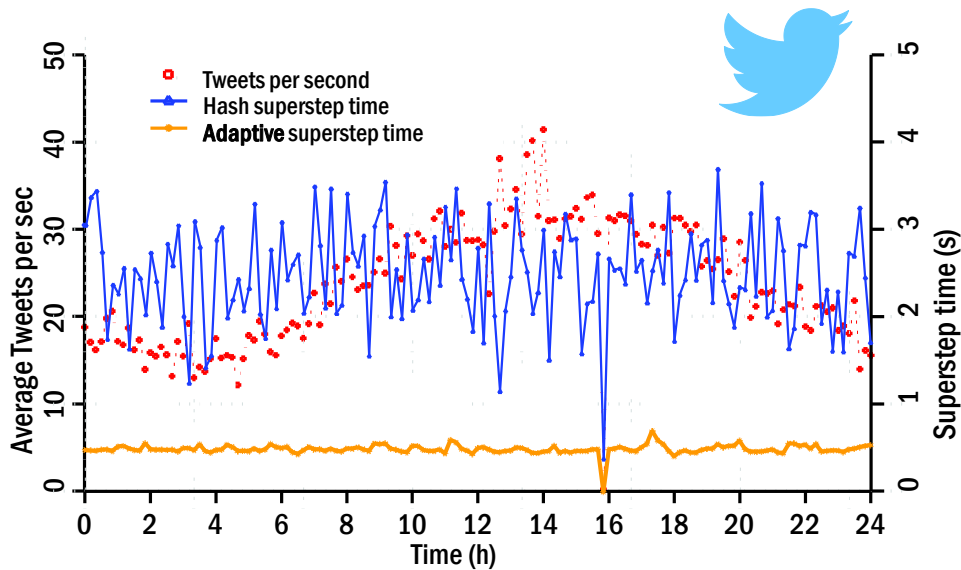
Iterative graph computation

Dynamic graph changes

Migrate where neighbours are



Results and way forward



Future work: **Graph Streams** (query the past)

Computation
models

Distributed
systems

Graph mining
algorithms