

# **PCOG**

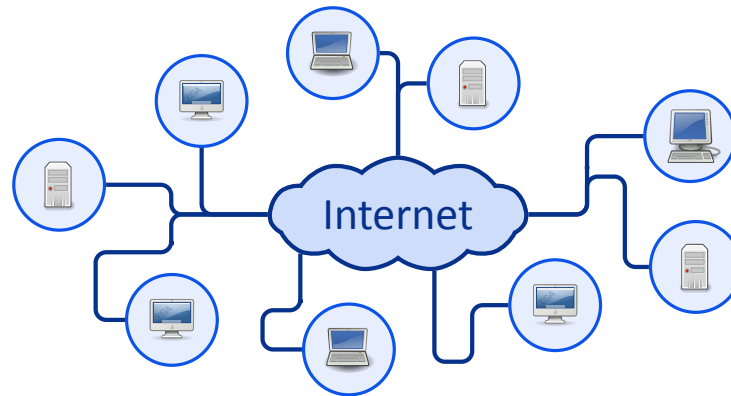
## **Yearly Team Meeting**

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**Jakub Muszyński**

19<sup>th</sup> November 2015

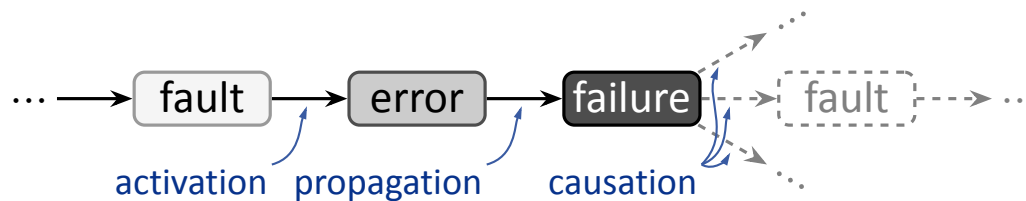
# Volunteer Computing



## Desktop Grids and Volunteer Computing Systems (DGVCS's)

- Using computing cycles of idle computers
- Highly volatile & heterogeneous

# Cheaters

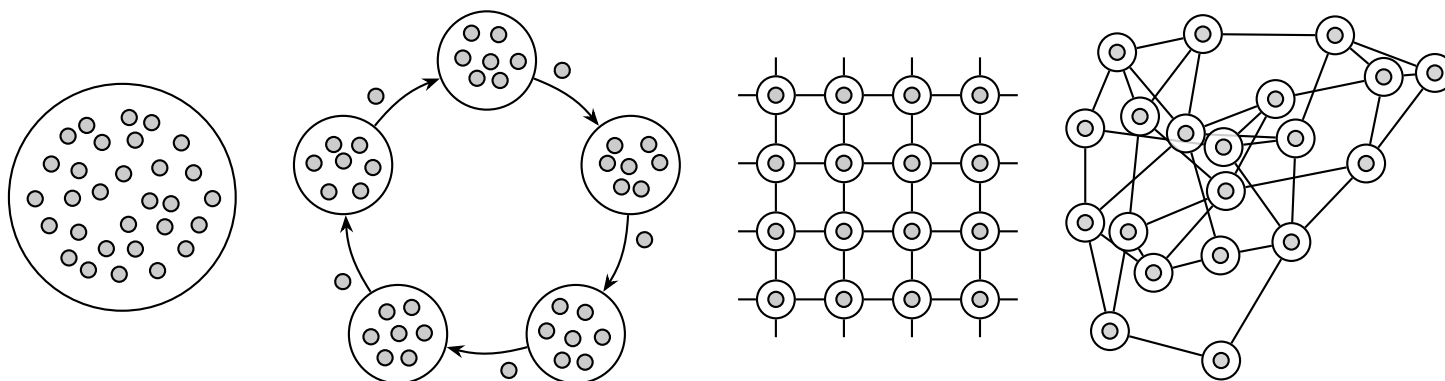


## Fault Tolerance (FT)

- Faults introduced by malicious users
  - Software tampering
  - Man-in-the-Middle (MitM) attacks
- Algorithm-Based Fault Tolerance (ABFT)
  - Error detection/correction tailored to the algorithm



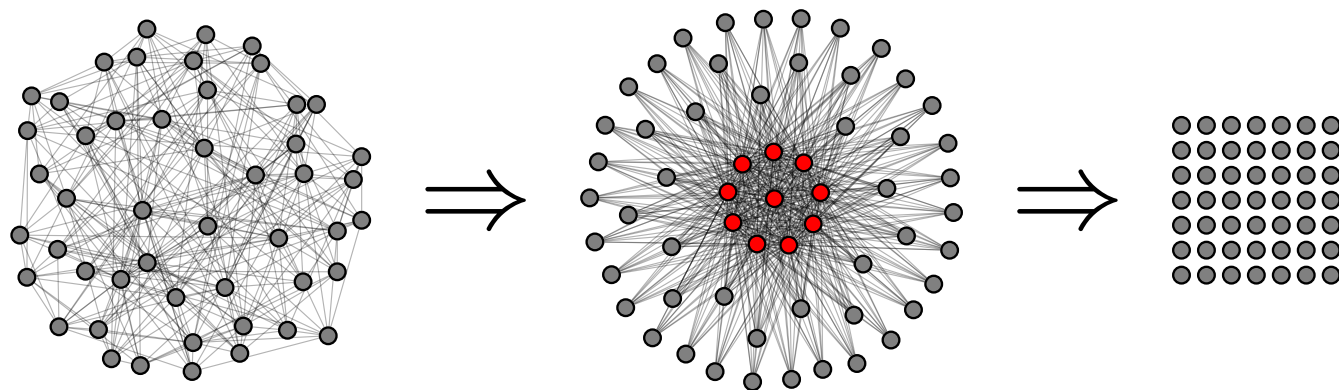
# Evolutionary Algorithms



## Evolutionary Algorithms (EAs)

- Parallel, decentralised & distributed
- Theoretical analysis

# Peer-to-Peer



## Peer-to-Peer (P2P) networks & computing

- Gossip protocols
- Distributed EAs

The end

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## Acronyms used

<b>ABFT</b>	Algorithm-Based Fault Tolerance
<b>DGVCS</b>	Desktop Grid and Volunteer Computing System
<b>EA</b>	Evolutionary Algorithm
<b>FT</b>	Fault Tolerance
<b>MitM</b>	Man-in-the-Middle
<b>P2P</b>	Peer-to-Peer