Tutorial for New Users
Eugenio Angriman

NetworKit Day 2020
Introduction
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Network analysis
Unveil non-trivial topological patterns
- Important / central / influential vertices
- Community structure
- ...

[Source: talkwalker.com]
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Challenges
- Efficient algorithms for the analysis of large networks
- Study the dynamics of those patterns in time-evolving networks
NetworKit – Main Goals and Modules
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Performance
- Efficient C++ back end
- Parallelism (with OpenMP)
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- Efficient C++ back end
- Parallelism (with OpenMP)

**Usability and Integration**
- Python front end (with Cython)
- Integration with external tools/packages:
  - Jupyter notebooks, Gephi
  - scipy, matplotlib . . .
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Community Detection
Centrality Measures
Graph Generators
Distance Computations
Link Prediction
Sparsification
Dynamic Algorithms
Basic Graph Toolbox
Algebraic Algorithms
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conda

More details about installation at github.com/networkit/networkit
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Jupyter Notebook Demo

Simple use cases:

1. Read a graph
2. Visualize a graph with Gephi
3. Computation of central vertices
4. Graph generators
5. Community detection
Conclusions – Where to get help
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- Read the docs:
  
  networkkit.github.io/dev-docs/index.html
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- Open an issue on GitHub:
  
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- Mailing list:
  networkkit@lists.hu-berlin.de
Thank you