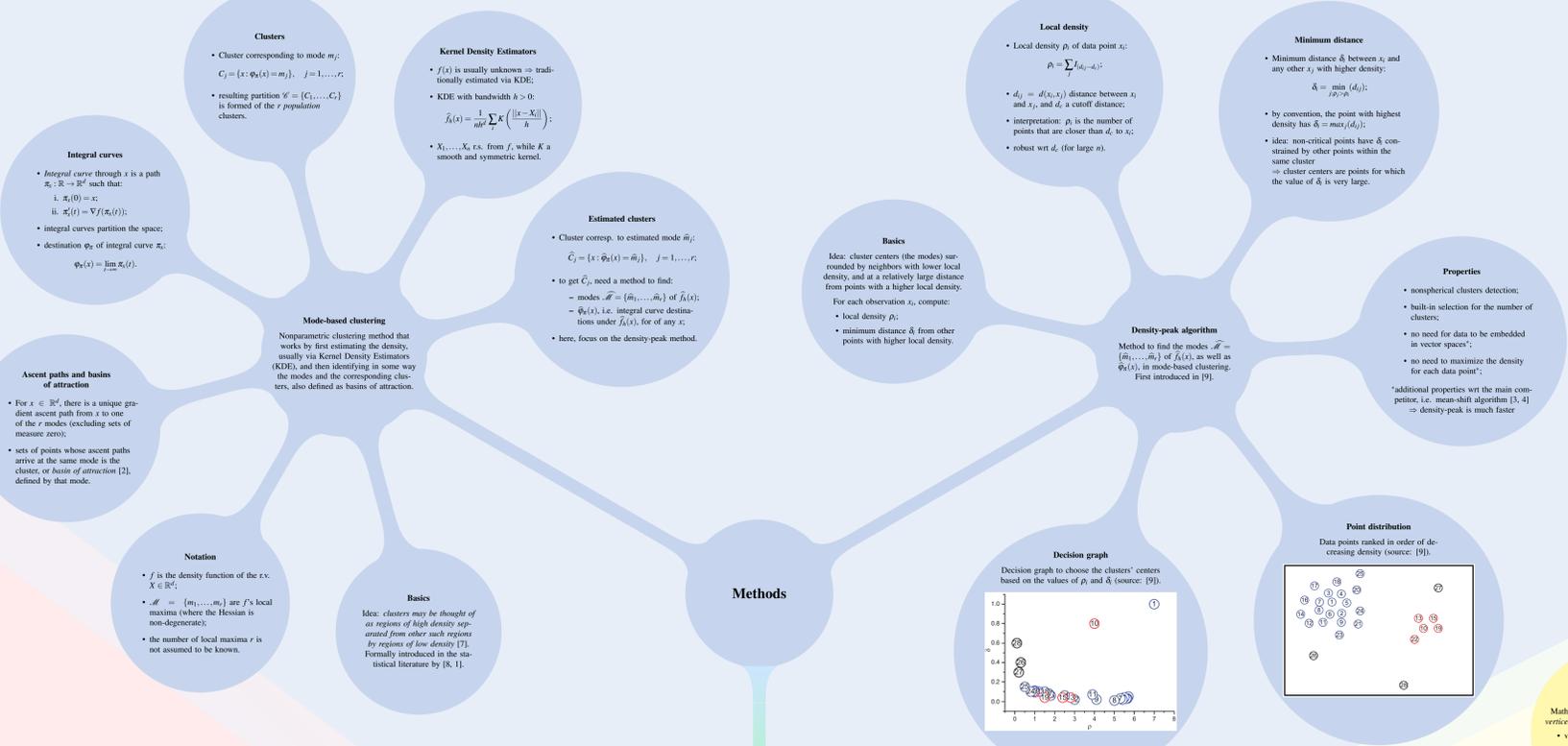


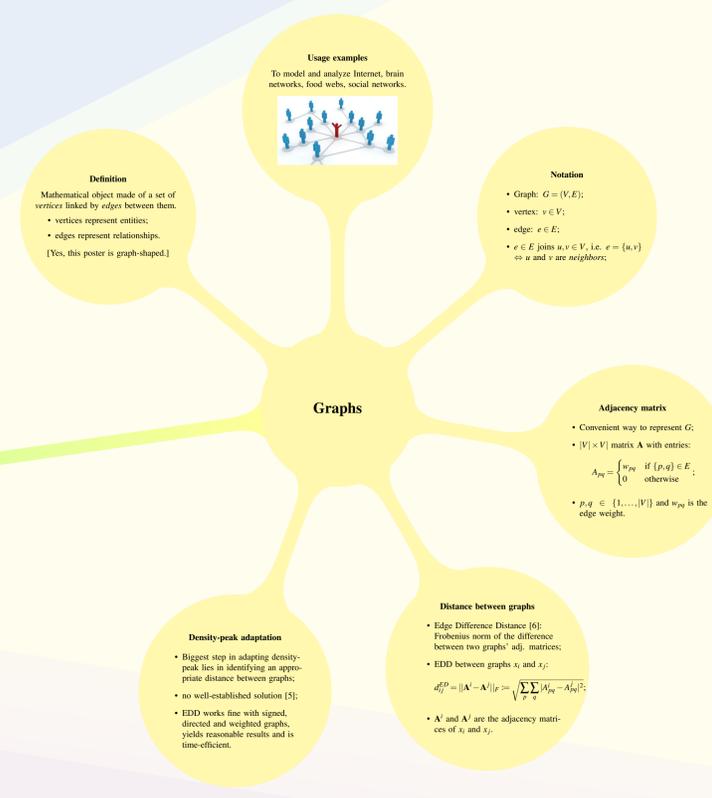
# A Density-Peak Approach to Clustering Graph-Structured Data

Riccardo Giubilei<sup>1,2</sup>  
<sup>1</sup>Sapienza University of Rome  
✉ riccardo.giubilei@uniroma1.it  
<sup>2</sup>Luiss Guido Carli  
✉ rgiubilei@luiss.it

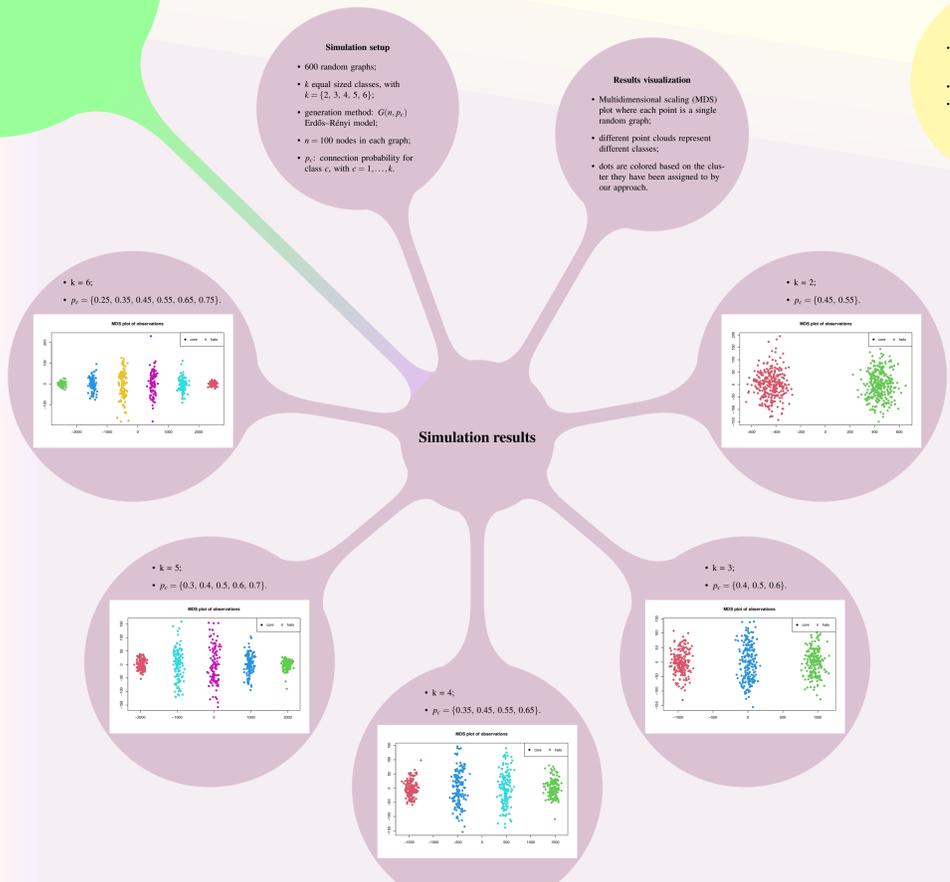
## Methods



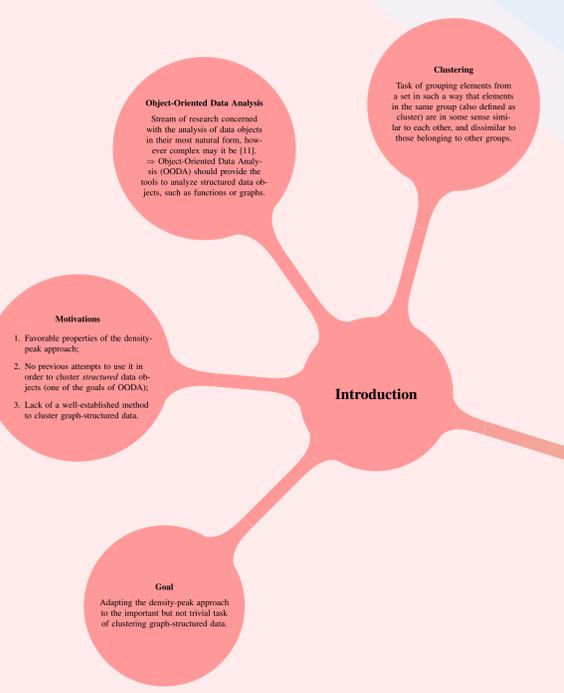
## Graphs



## Simulation results



## Introduction



## References

- Azalim, A., Toull, N.: Clustering via nonparametric density estimation. *Statistics and Computing* 17(1), 71–80 (2007)
- Chacón, J.E.: Clusters and water flows: a novel approach to modal clustering through morse theory. arXiv preprint arXiv:1212.1384 (2012)
- Cheng, Y.: Mean shift, mode seeking, and clustering. *IEEE PAMI* 17(8), 790–799 (1995)
- Comaniciu, D., Meer, P.: Mean shift: A robust approach toward feature space analysis. *IEEE PAMI* 24(5), 603–619 (2002)
- Emmert-Streib, F., Dehmer, M., Shi, Y.: Fifty years of graph matching, network alignment and network comparison. *Inf* 346, 180–197 (2016)
- Hammond, D.K., Gu, Y., Johnson, C.R.: Graph diffusion distance: A difference measure for weighted graphs based on the graph laplacian exponential kernel. In: *IEEE GlobalSIP* 2013, pp. 419–422. *IEEE* (2013)
- Hartigan, J.A.: *Clustering algorithms*. John Wiley & Sons, Inc. (1975)
- Li, J., Ray, S., Lindsay, B.G.: A nonparametric statistical approach to clustering via mode identification. *J Mach Learn Res* 8, 1687–1723 (2007)
- Rodriguez, A., Lajo, A.: Clustering by fast search and find of density peaks. *Science* 344(6191), 1492–1496 (2014)
- Sitranaya, S., Franti, P.: Fast and general density peaks clustering. *Pattern Recognit Lett* 128, 551–558 (2019)
- Wang, H., Marron, J.S.: Object oriented data analysis: Sets of trees. *Ann Stat* 35(5), 1849–1873 (2007)