applications **science**

introduction to **network science in Python** (**NetPy**)

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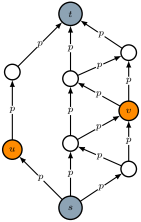
science **historiography**

— **algorithmic historiography** tracks evolution of field

— relying on **citations** between scientific **publications**



(**input**) selected **source** & **target** publications s & t

(**method**) each citation is relevant/active with **probability** p

(**output**) **importance** is **probability of path from s** to **t** through **u**

science **modularity**

(**target**) Newman & Girvan (2004), **Finding and evaluating community...**, *Phys. Rev. E* **69**(2), 026113.

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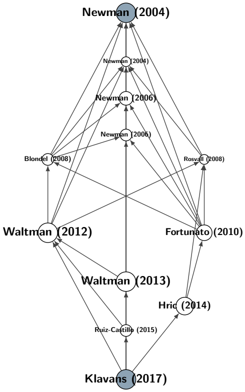

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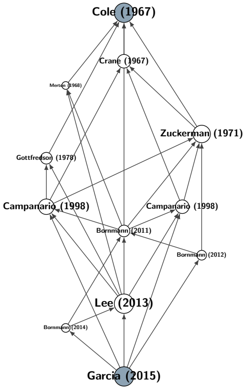
science **peer review**

(**target**) Cole & Cole (1967), **Scientific output and recognition**, *Am. Sociol. Rev.* **32**(3), 377-390.

(**source**) Garcia et al. (2015), **The author-editor game**, *Scientometrics* **104**(1), 361-380.



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snapshot of WoS collected by (**Batagelj et al., 2017**)

science **small-world**

(**target**) Watts & Strogatz (1998), **Collective dynamics of 'small-world' networks**, *Nature* **393**(6684), 440-442.

(**source**) Backstrom et al. (2012), **Four degrees of separation**, In: *Proceedings of the WebSci '12*, pp. 45-54.

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science **scale-free**

(**target**) Barabási & Albert (1999), **Emergence of scaling in random networks**, *Science* **286**(5439), 509-512.

(**source**) Liu et al. (2011), **Controllability of complex networks**, *Nature* **473**(7346), 167-173.

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science **deep learning**

(**target**) LeCun et al. (2015), **Deep learning**, *Nature* **521**(7553), 436-444.

(**source**) Silver et al. (2017), **Mastering the game of Go without human knowledge**, *Nature* **550**(7676), 354-359.

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Lovro Šubelj, Ludo Waltman, Vincent Traag, and Nees Jan van Eck.
Intermediacy of publications.
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