

Teorie grafů a realistické modely sítí

Obsah

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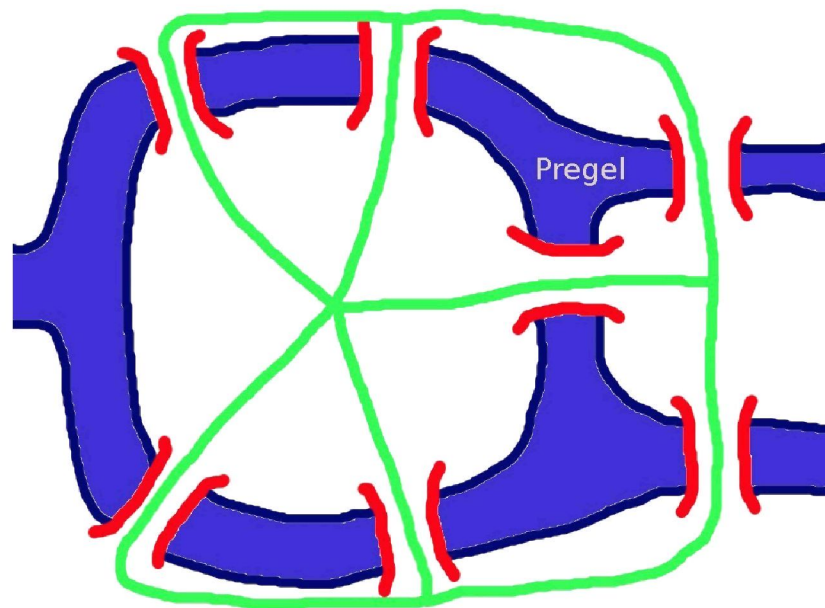
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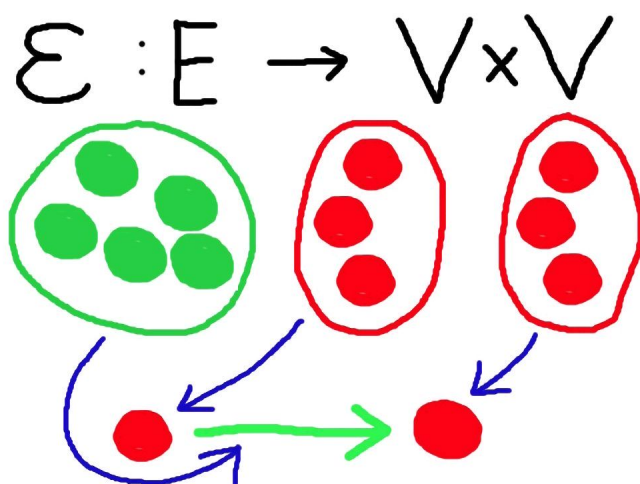
Problém mostů v Königsbergu



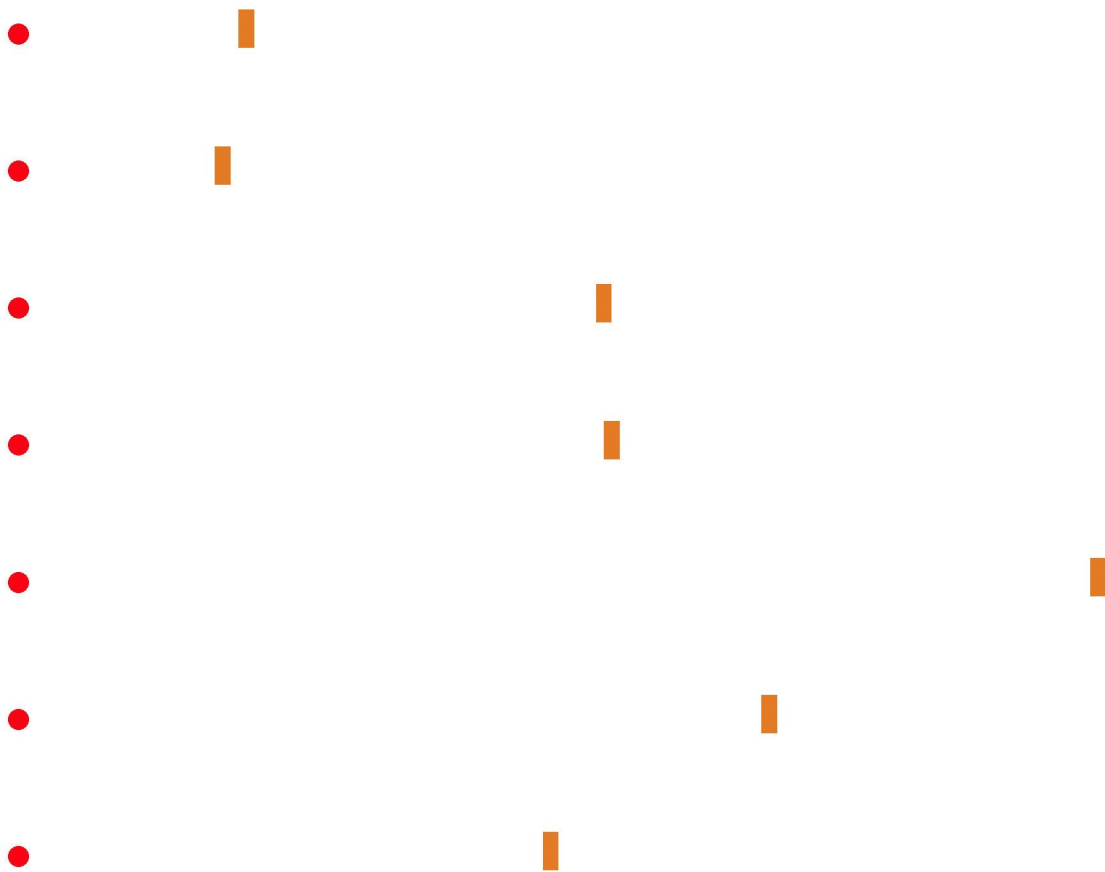
Problémy řešené pomocí teorie grafů

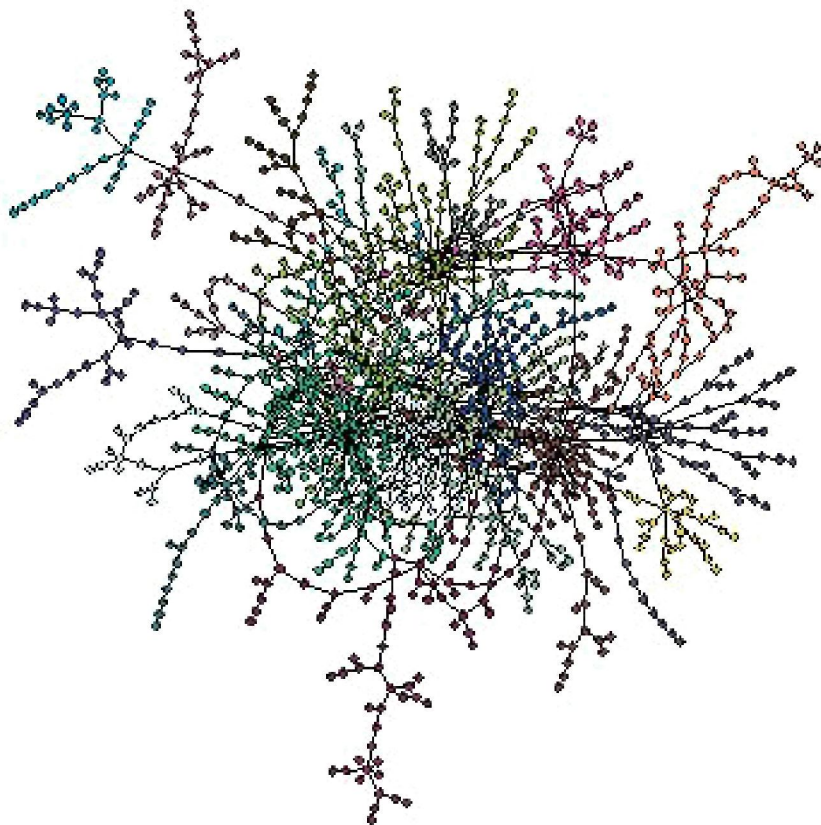


Definice grafu



Grafy ve světě okolo nás

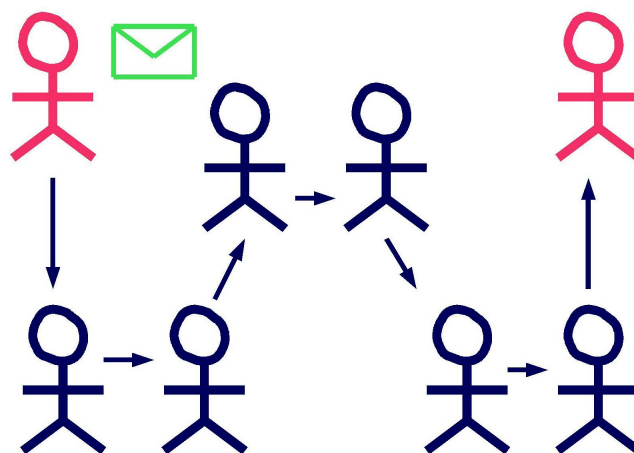




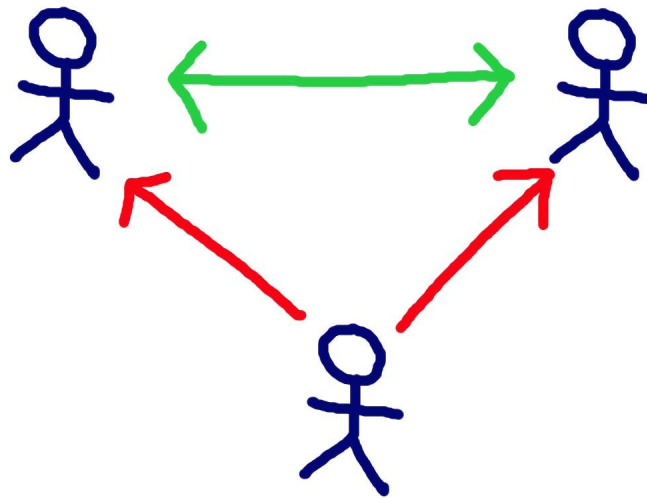
Obecné vlastnosti sítí



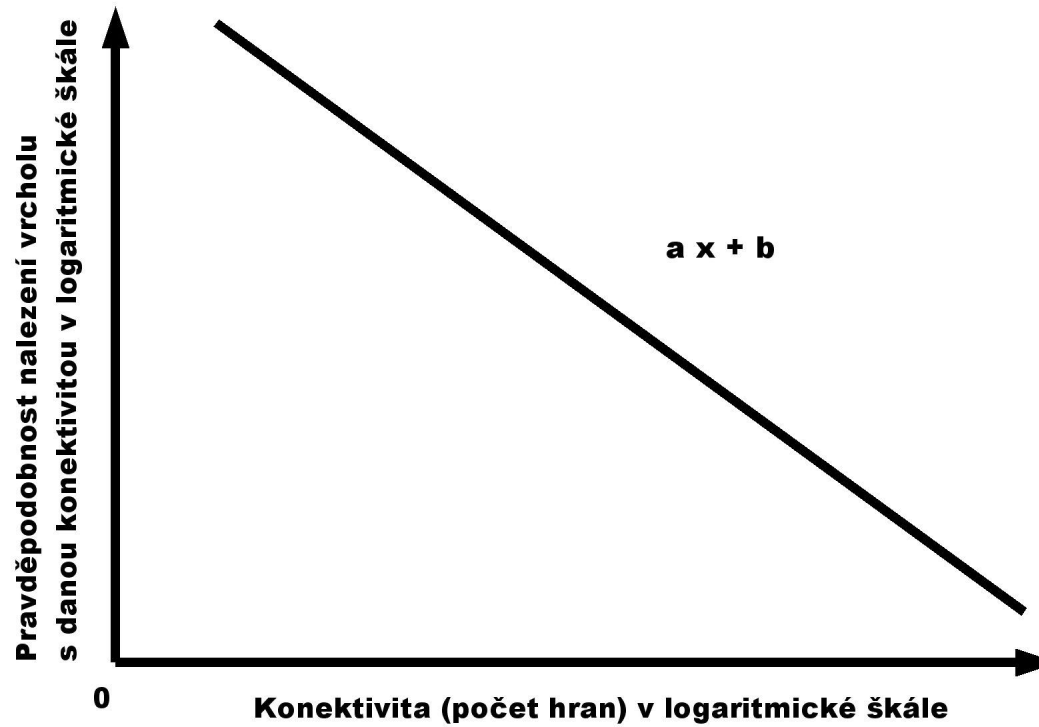
Vlastnost malého světa



Vysoký klastrovací koeficient



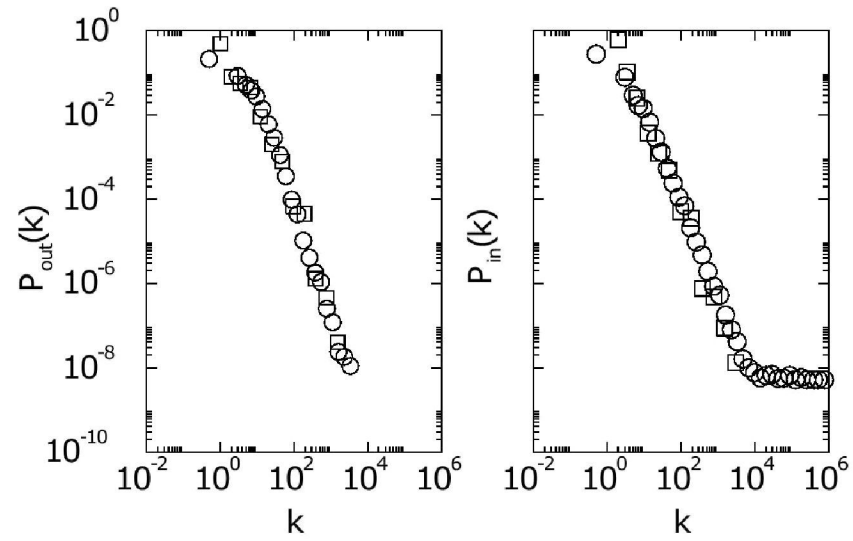
Mocninné chování rozdělení konektivit



Mocninné chování rozdělení konektivit

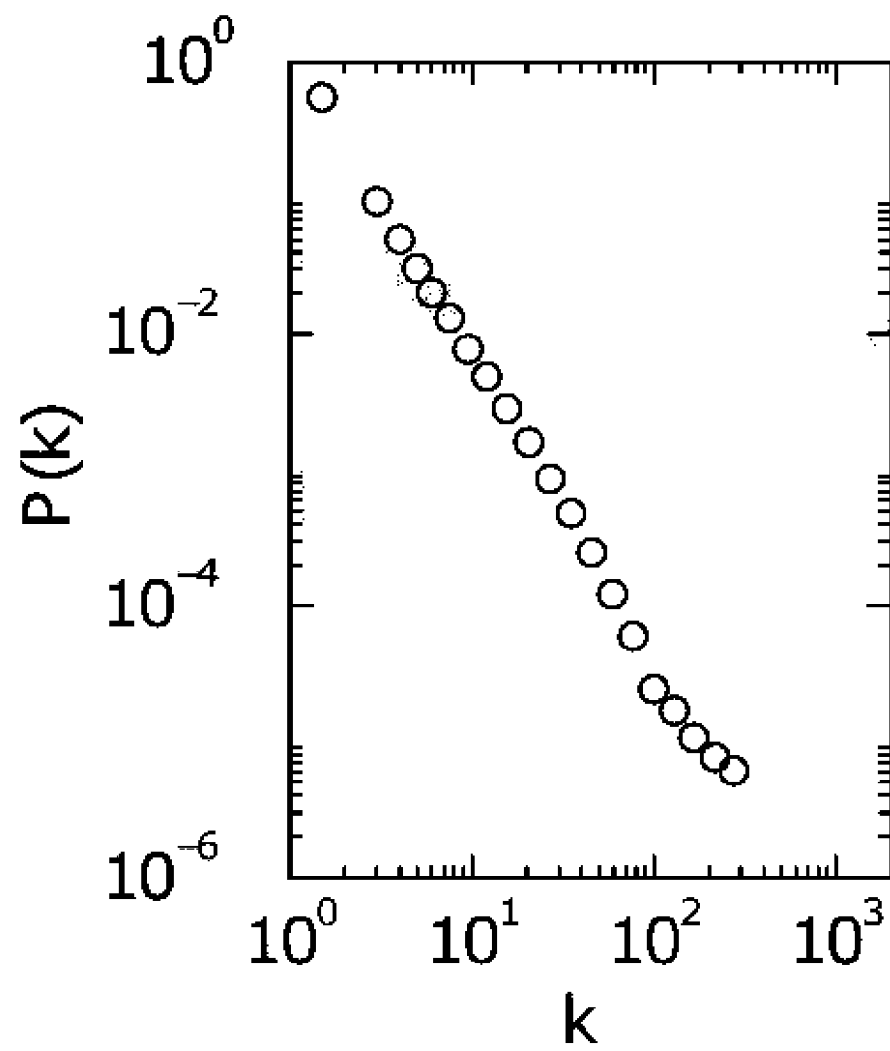


World wide web (WWW)

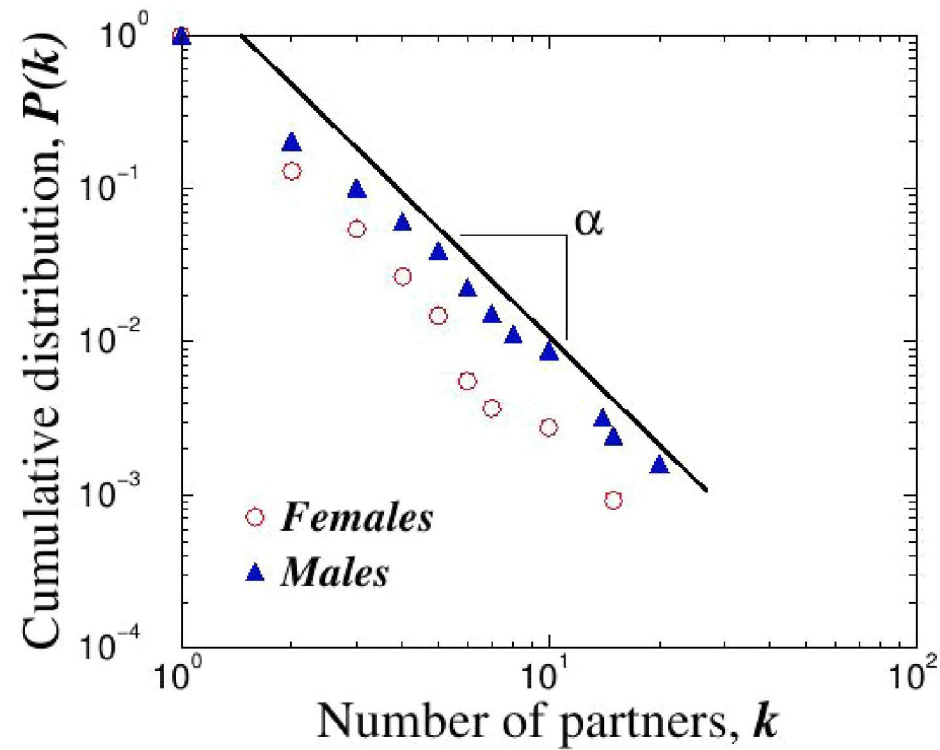


Internet

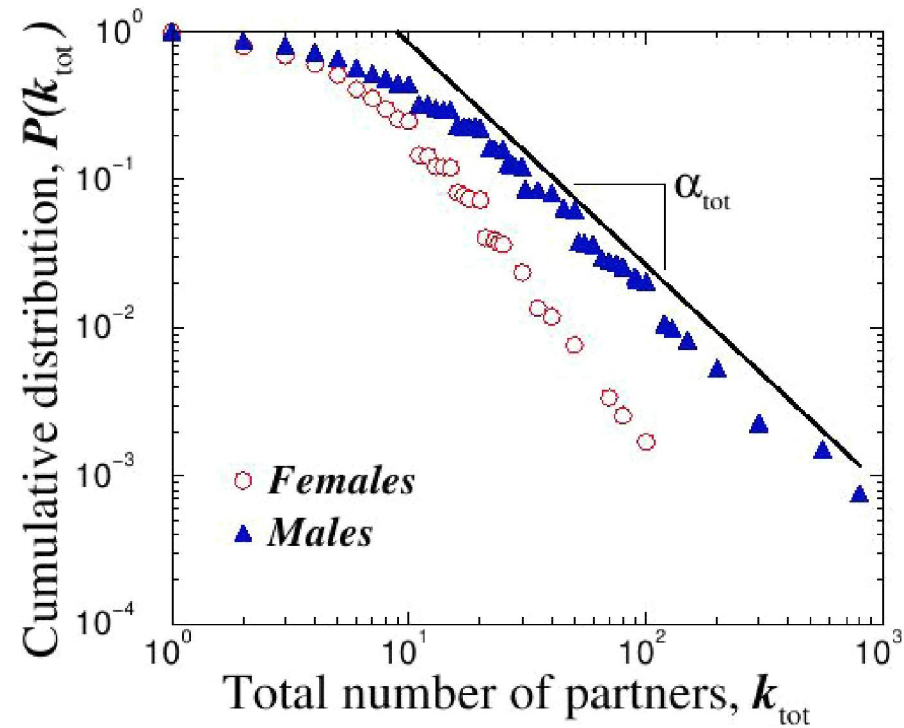




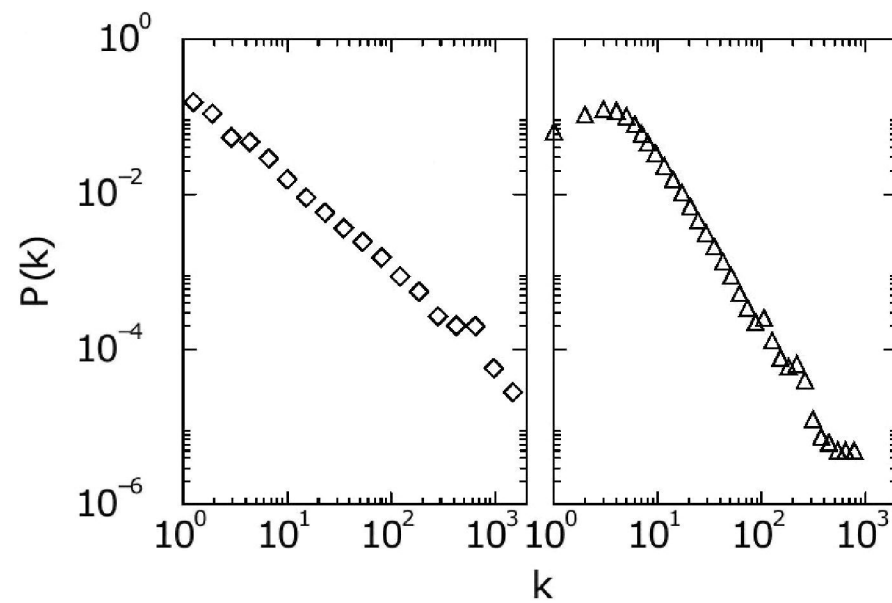
Sít sexuálních kontaktů - rozdělení po 1 roce



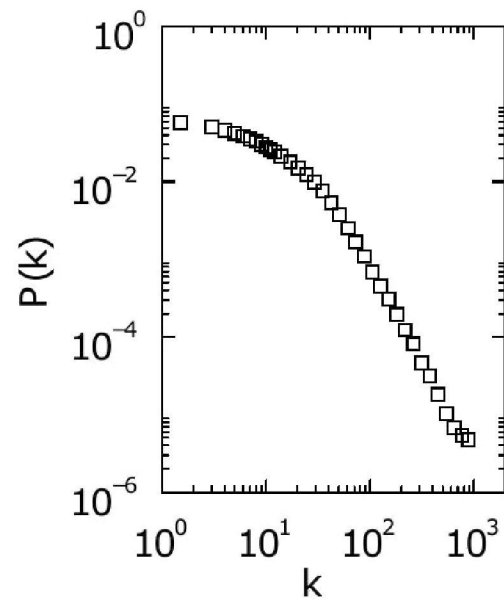
Sít sexuálních kontaktů - úplné rozdělení



Sít spoluautorství v různých vědních oborech



Sít spolupráce filmových herců



Modely sítí



Edös-Rényi model

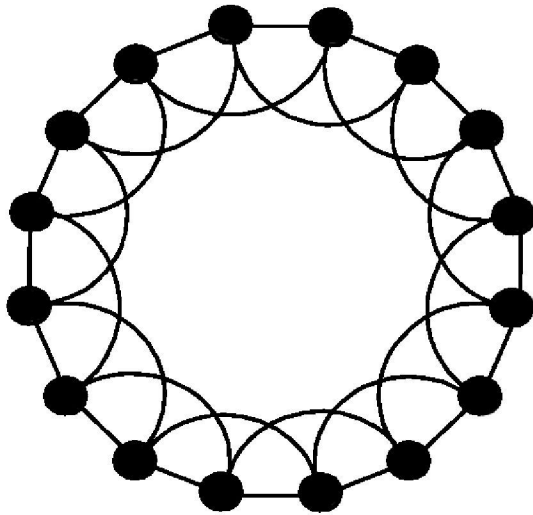


Watts-Strogatz model



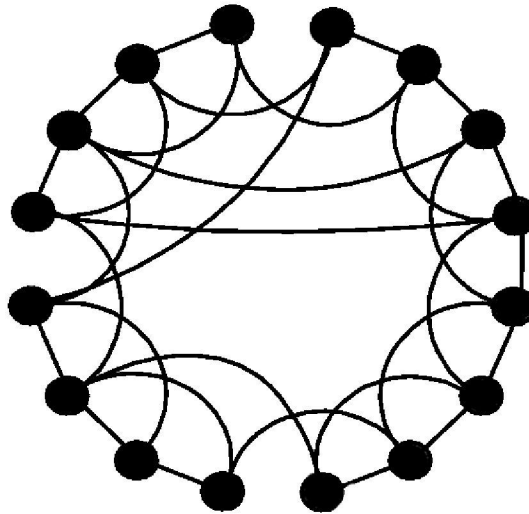
Watts-Strogatz model - konstrukce

Regular

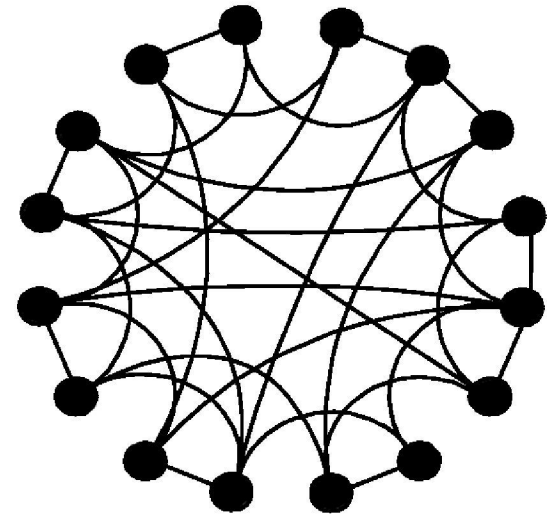


p=0

Small-world



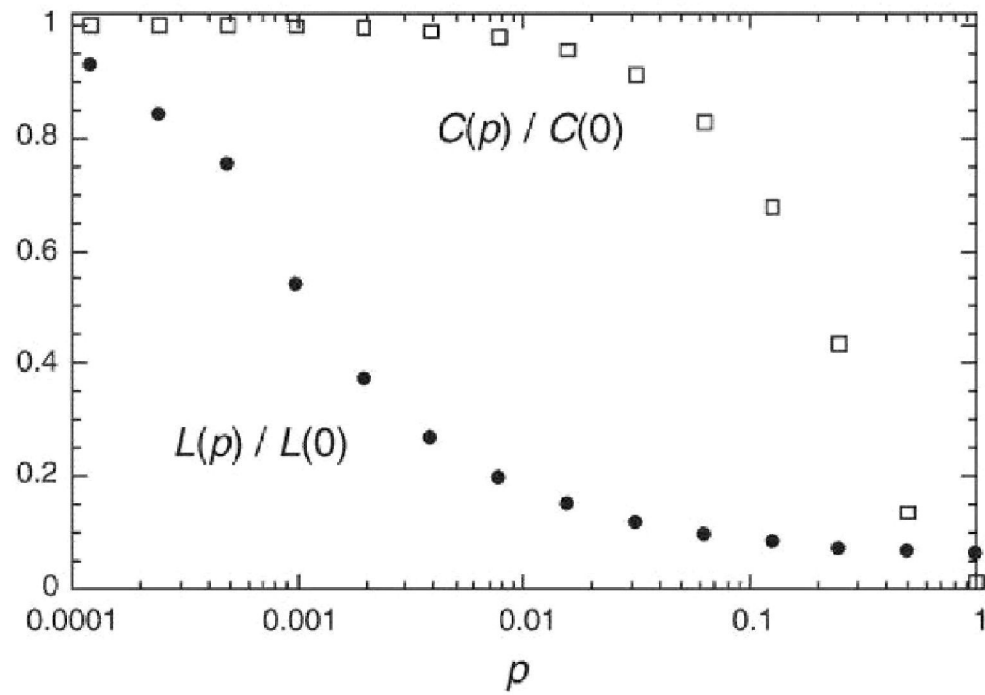
Random



p=1

Increasing randomness

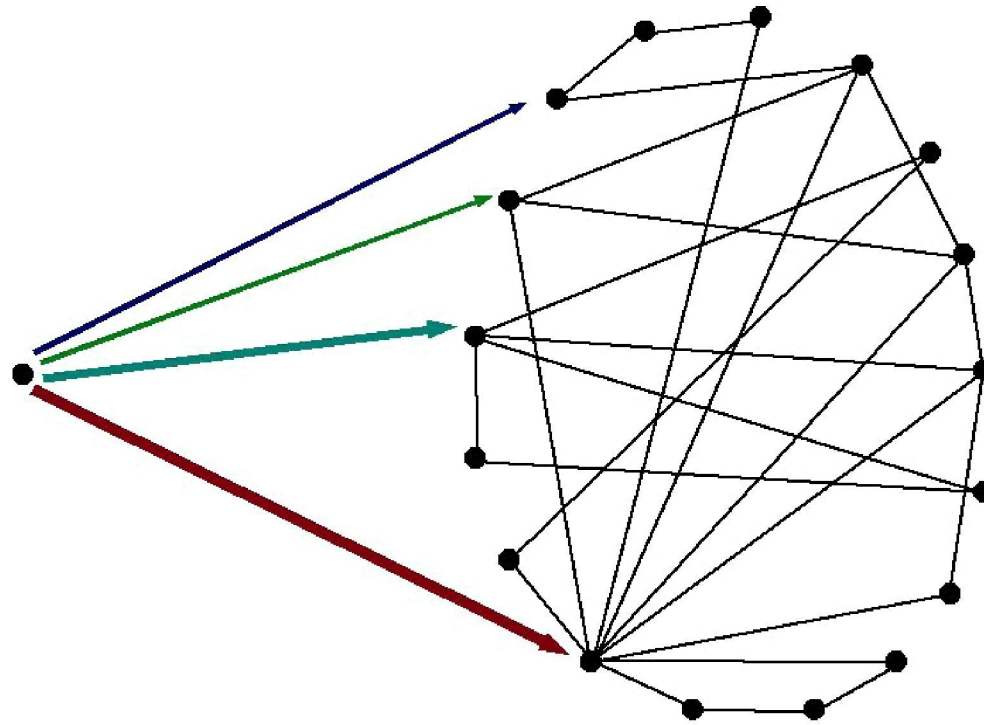
Watts-Strogatz model - výsledky



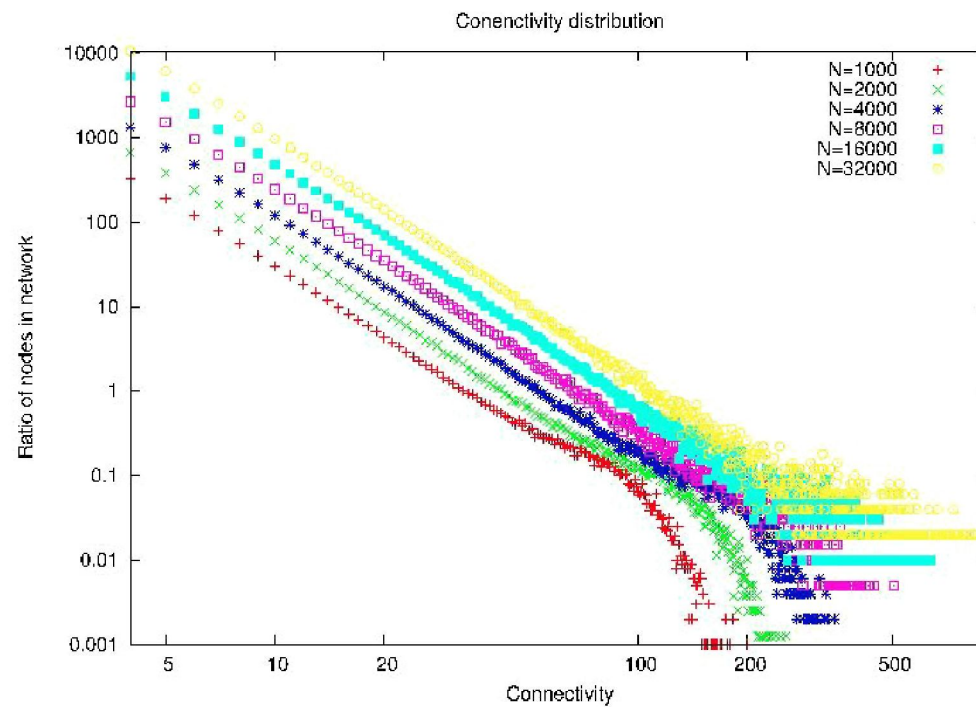
Barabási-Albert model



Barabási-Albert model - konstrukce



Barabási-Albert model - výsledky



Závěr

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Literatura