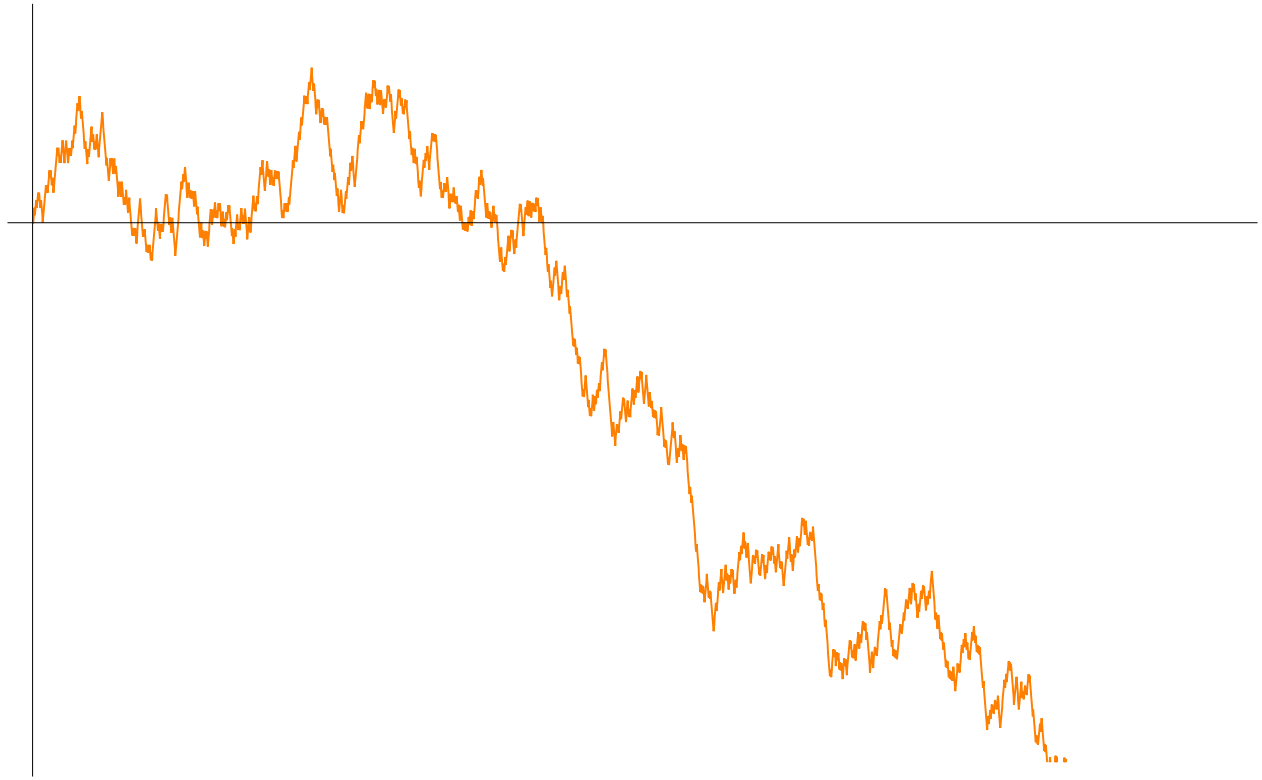
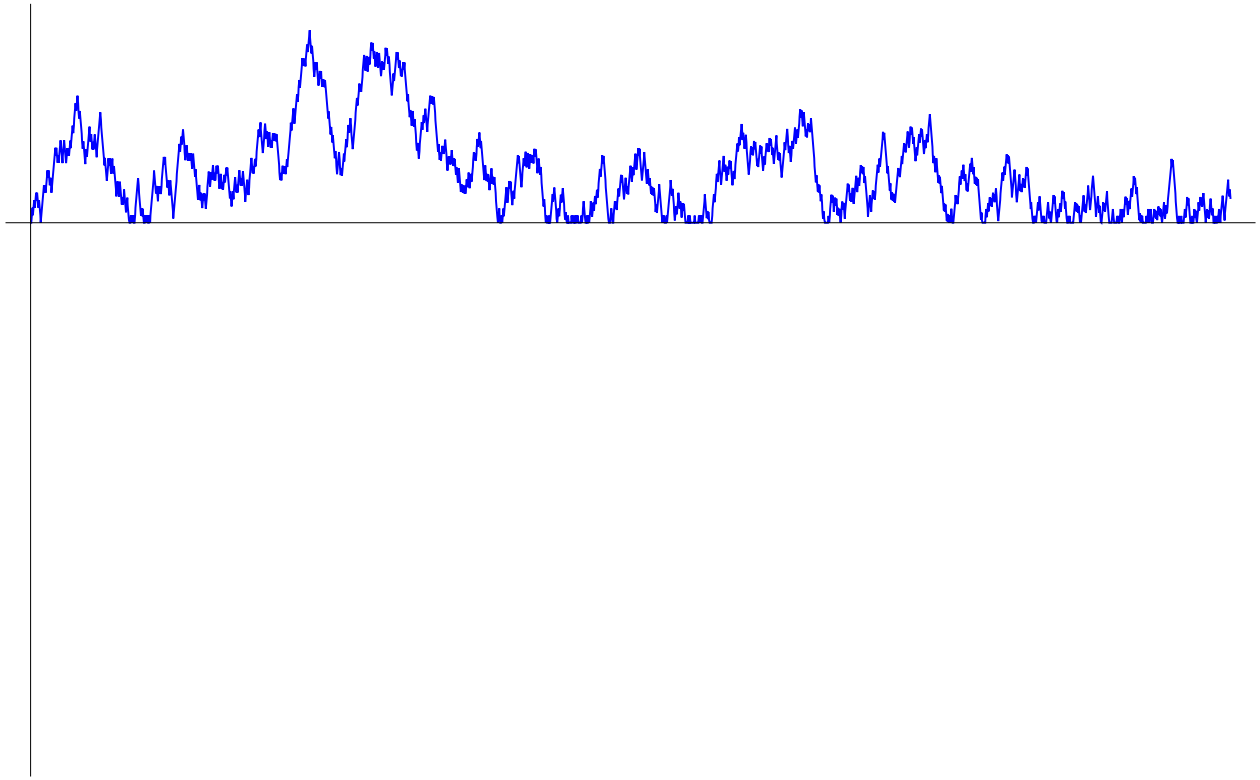
Lecture 3

Component sizes and surplus edges



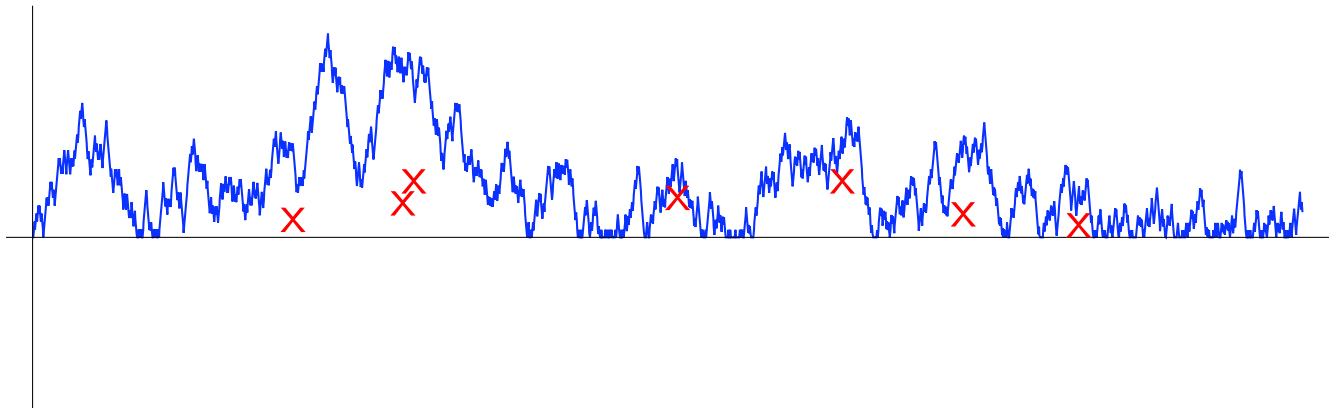
[Picture by Louigi Addario-Berry]

Component sizes and surplus edges



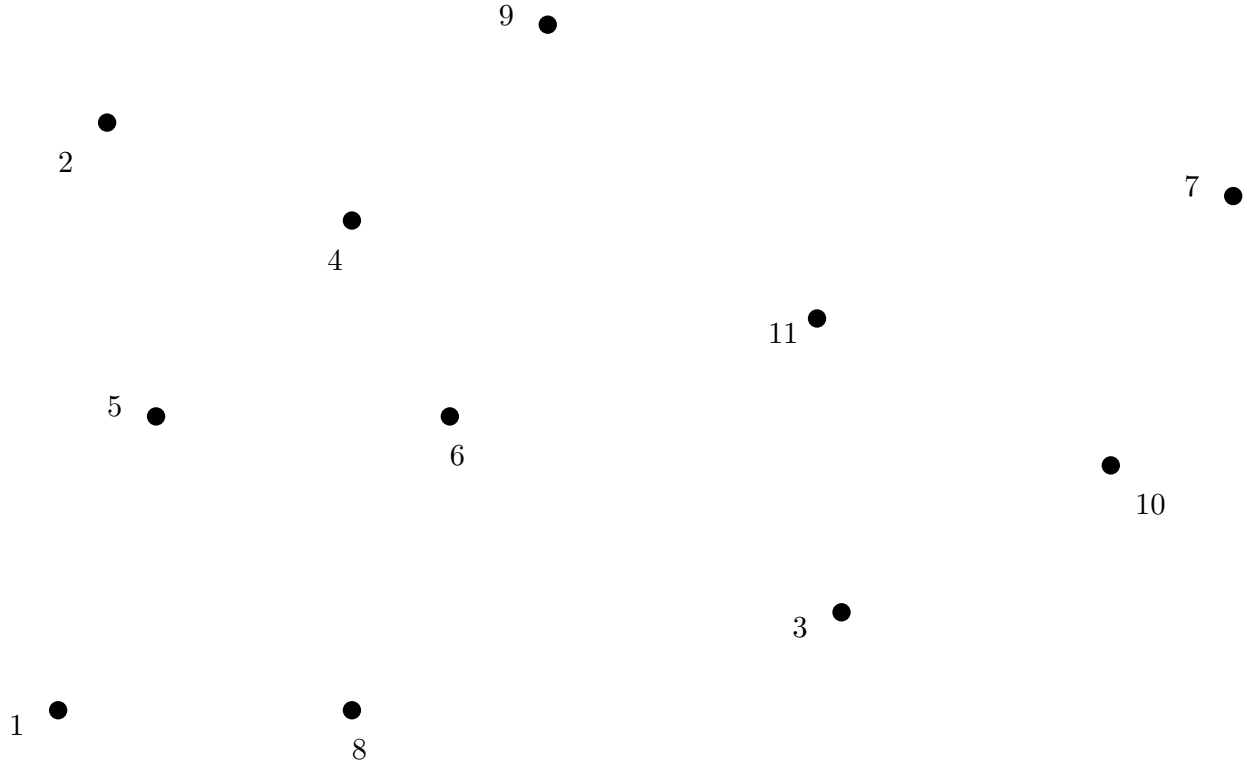
[Picture by Louigi Addario-Berry]

Component sizes and surplus edges

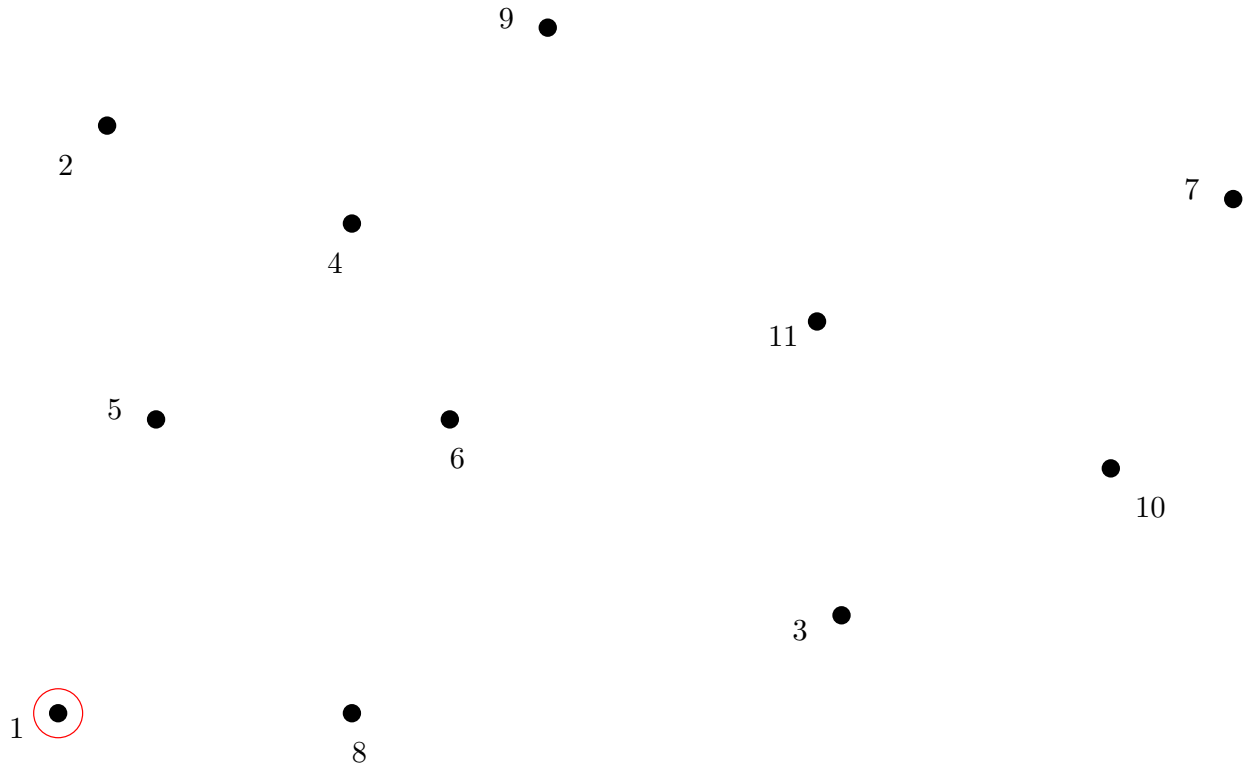


[Picture by Louigi Addario-Berry]

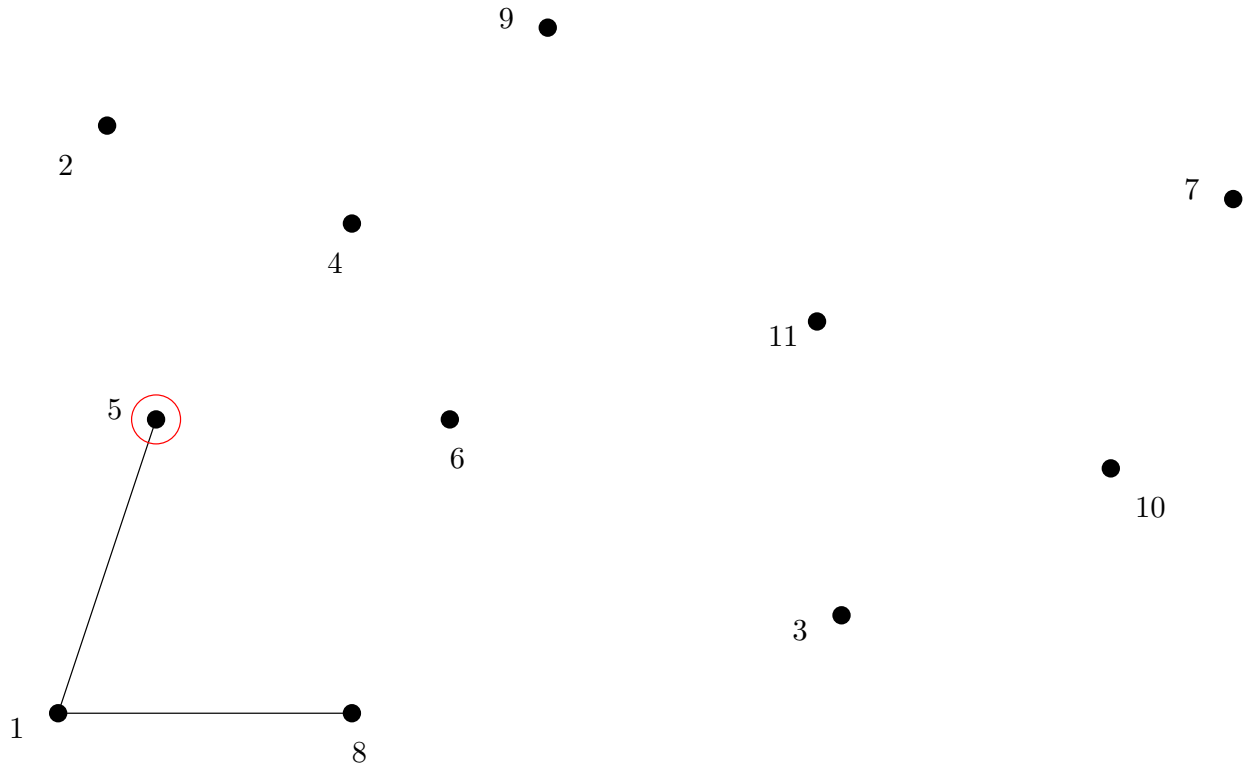
Critical random graph: depth-first walk



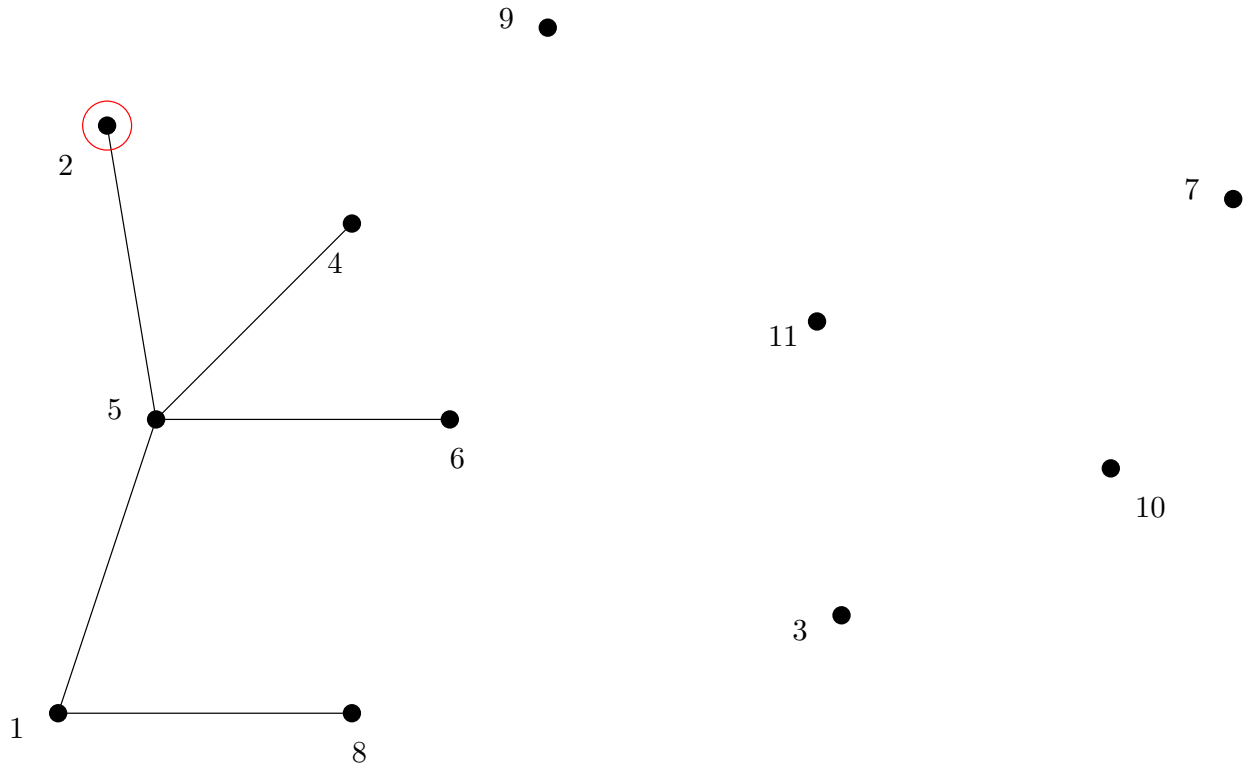
Critical random graph: depth-first walk



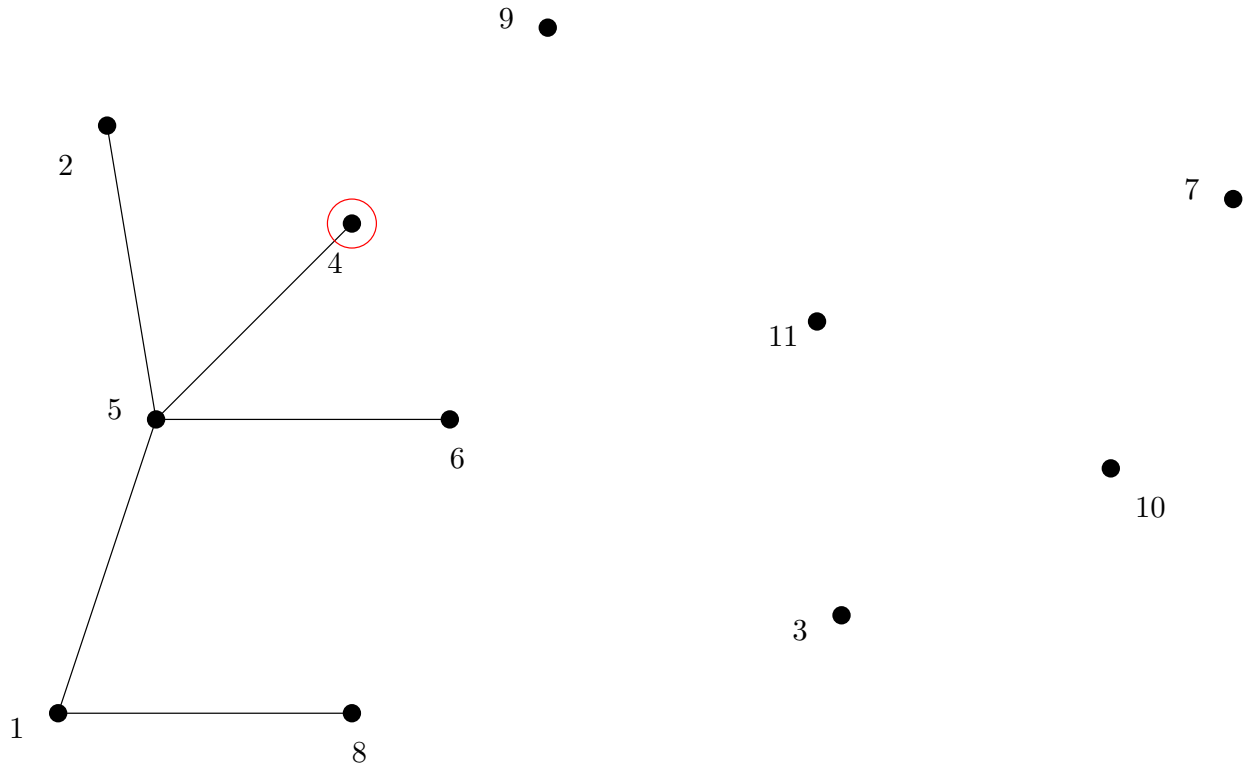
Critical random graph: depth-first walk



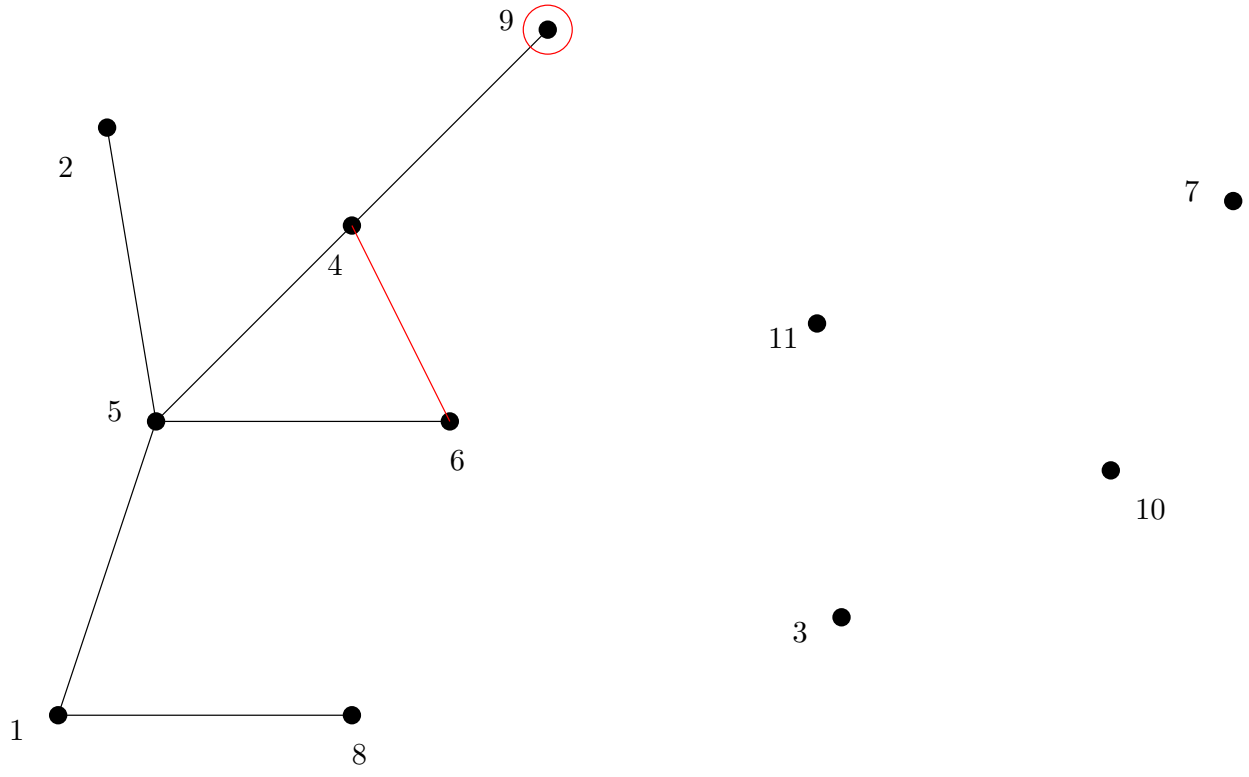
Critical random graph: depth-first walk



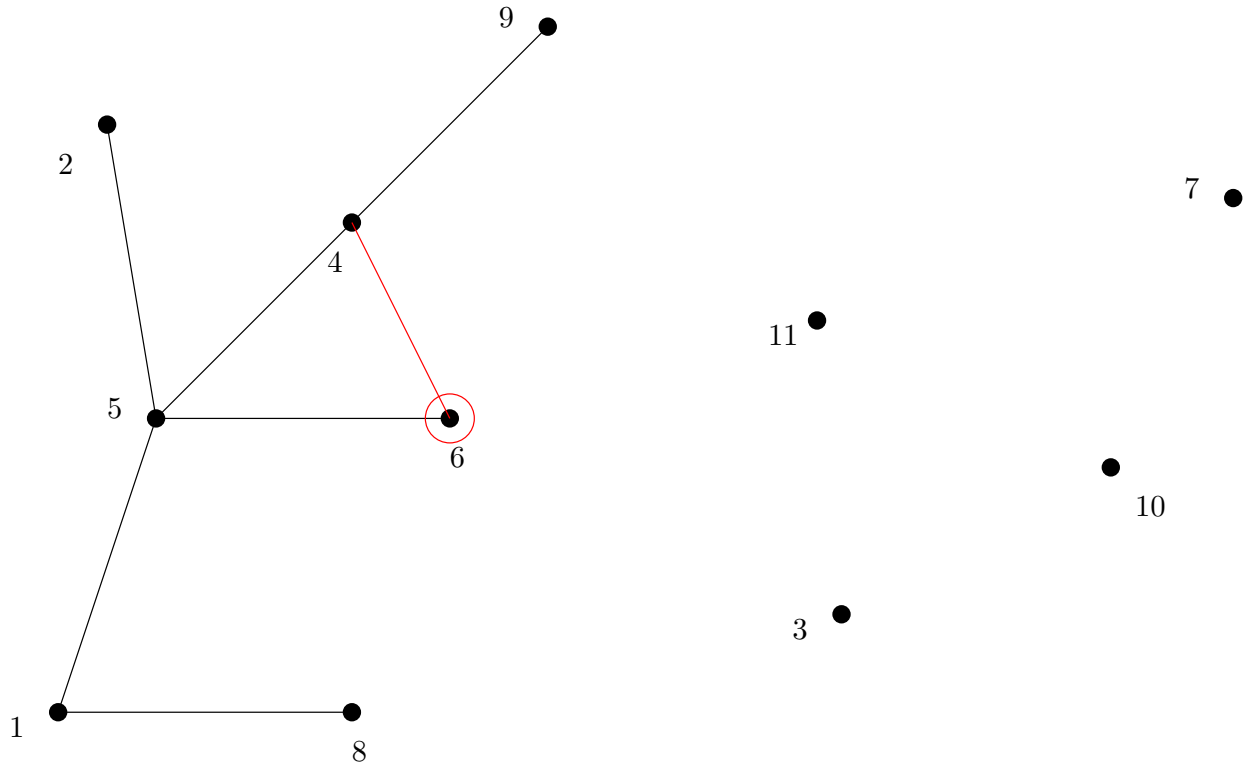
Critical random graph: depth-first walk



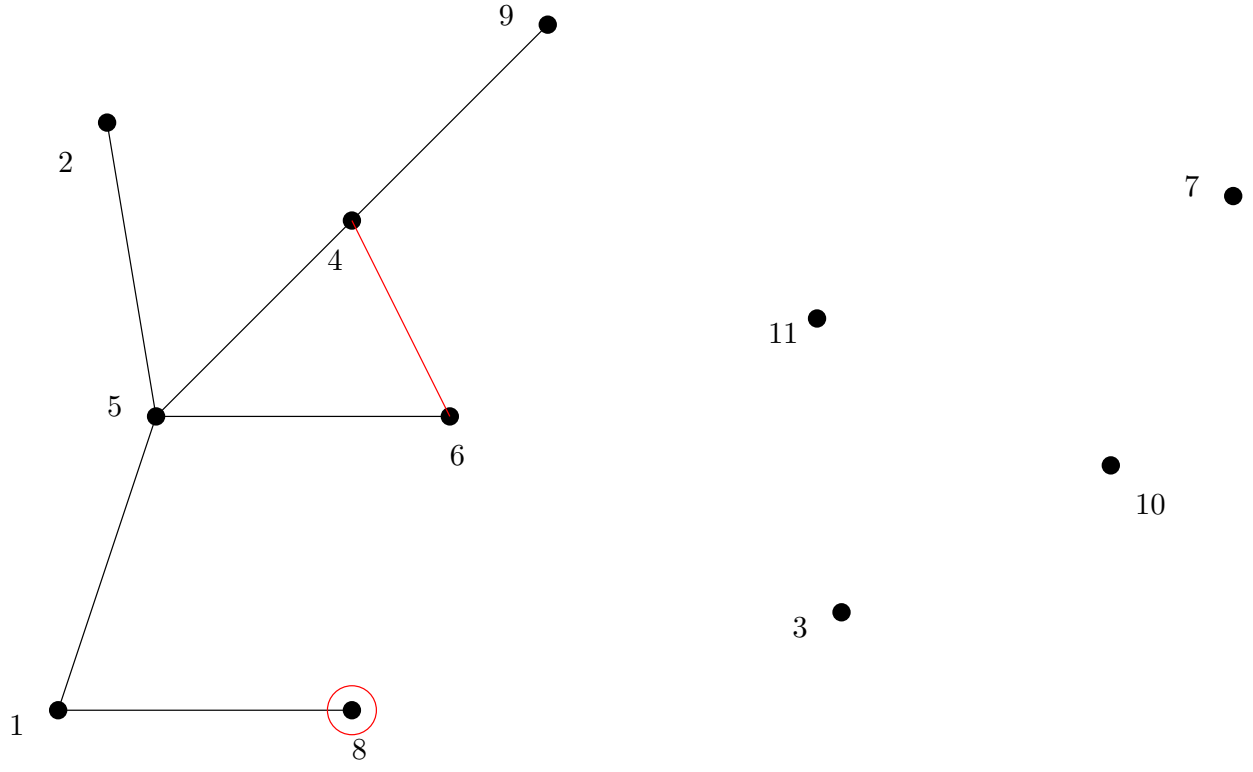
Critical random graph: depth-first walk



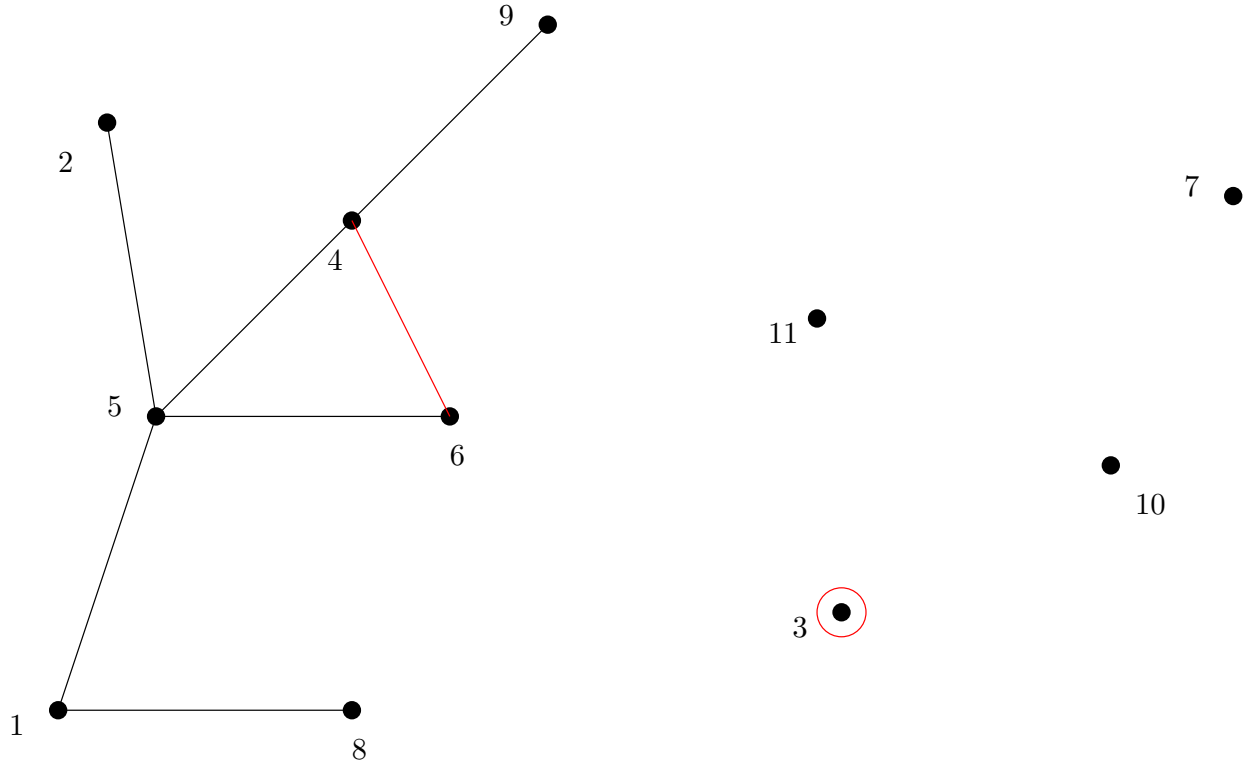
Critical random graph: depth-first walk



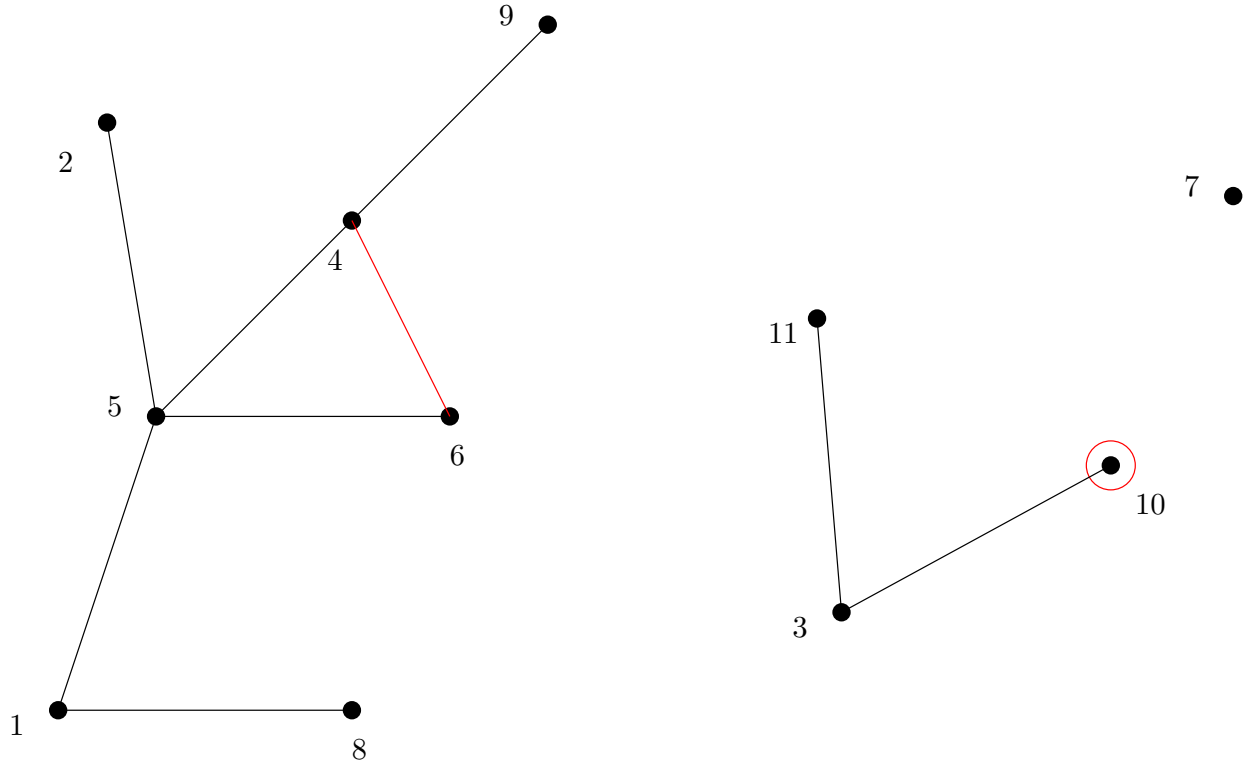
Critical random graph: depth-first walk



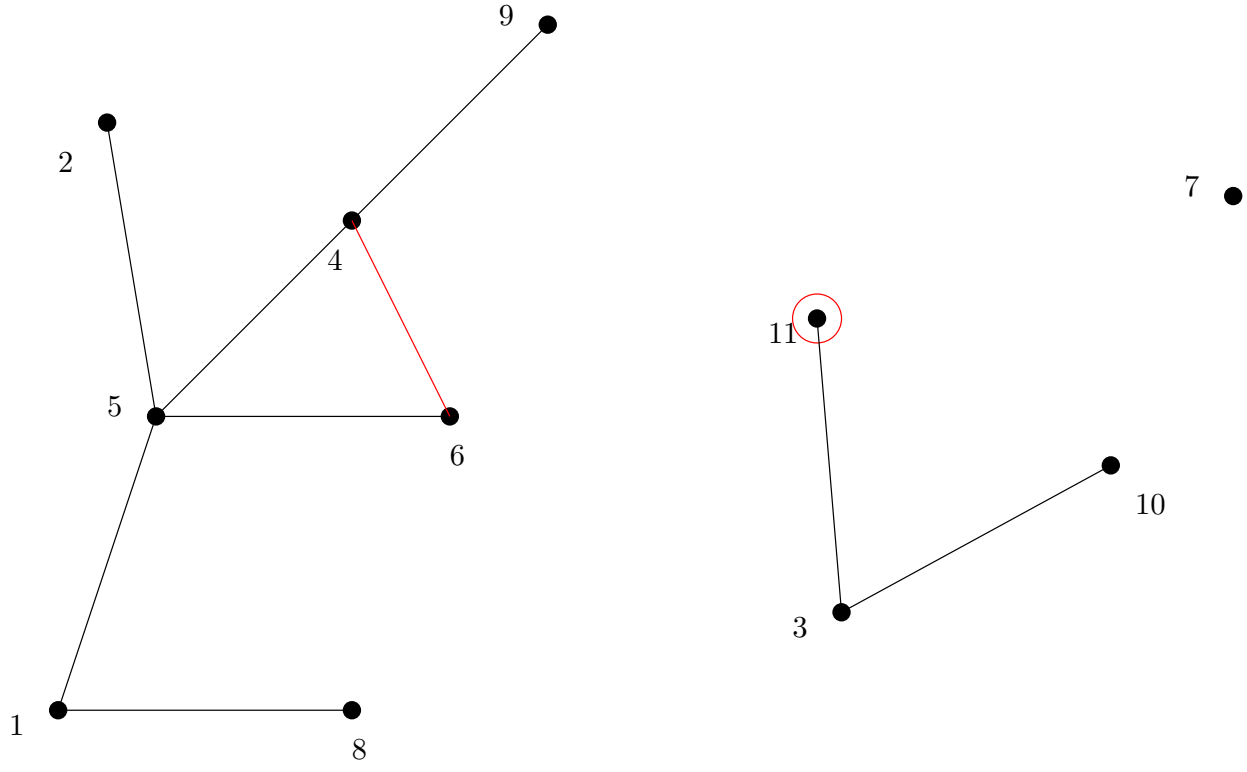
Critical random graph: depth-first walk



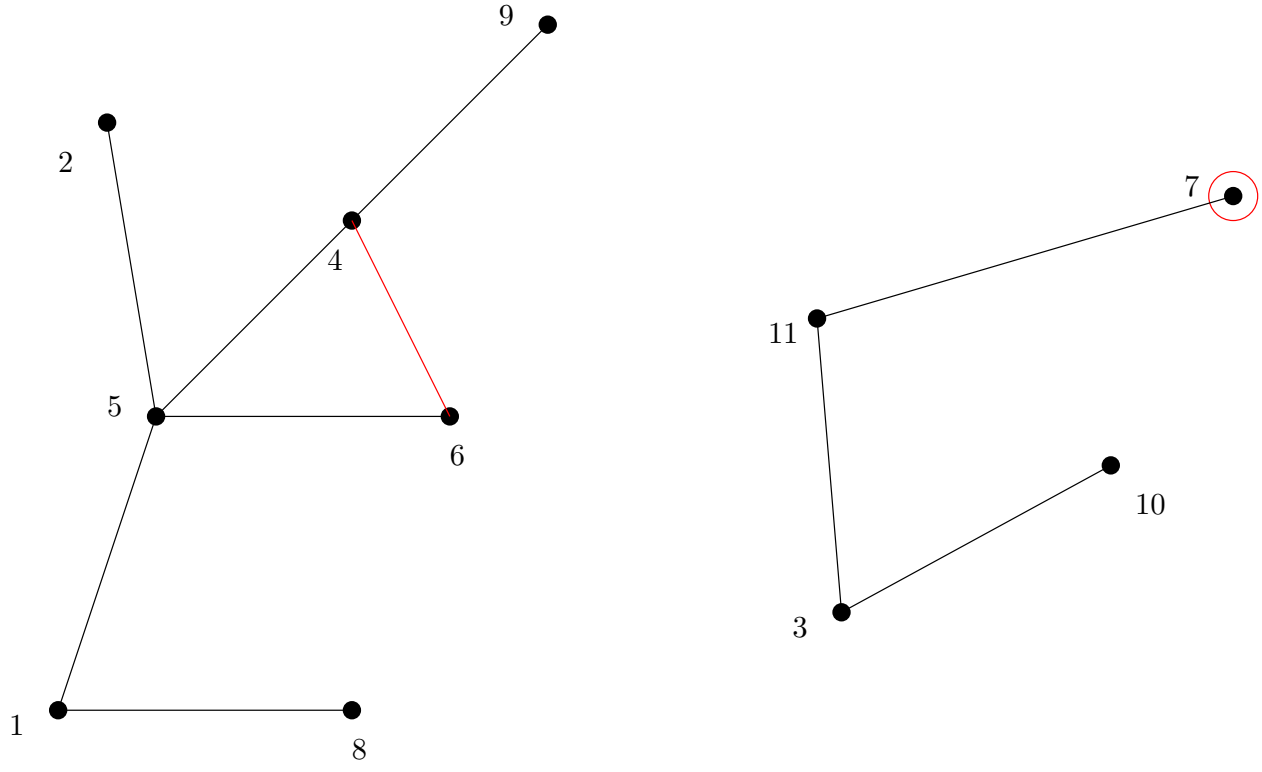
Critical random graph: depth-first walk



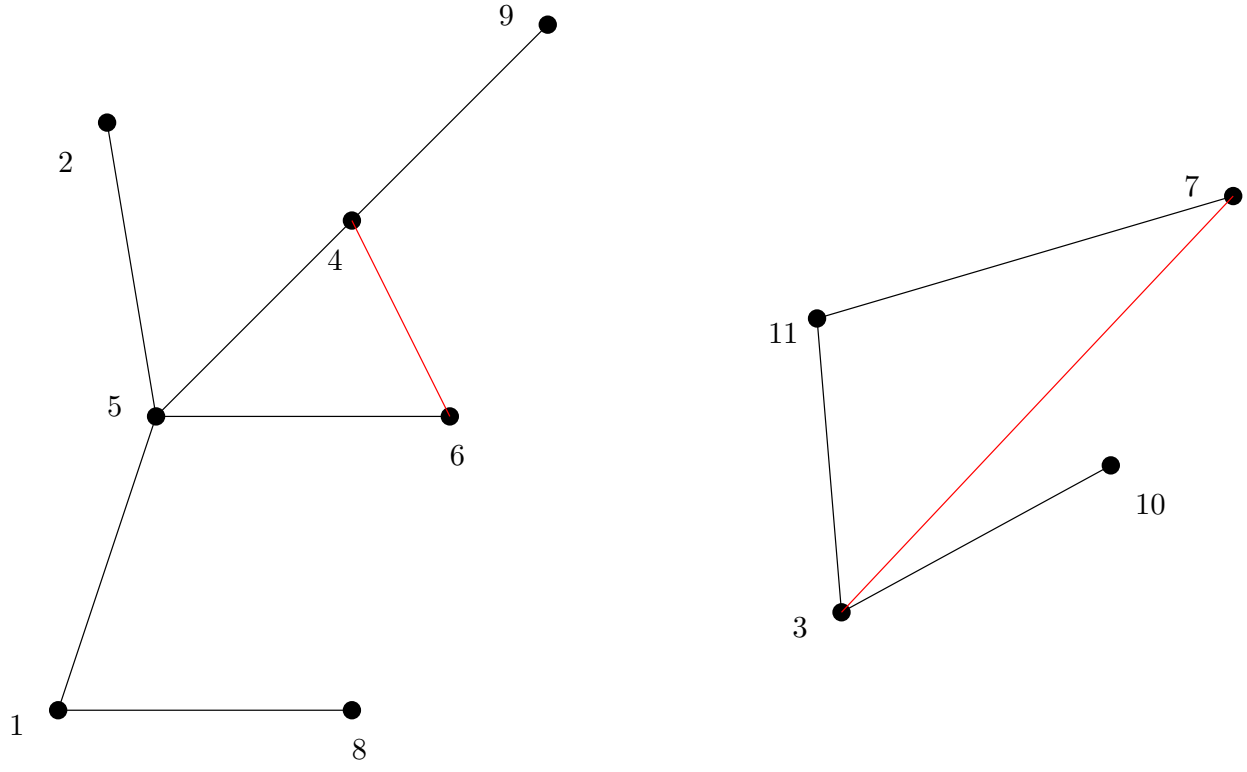
Critical random graph: depth-first walk



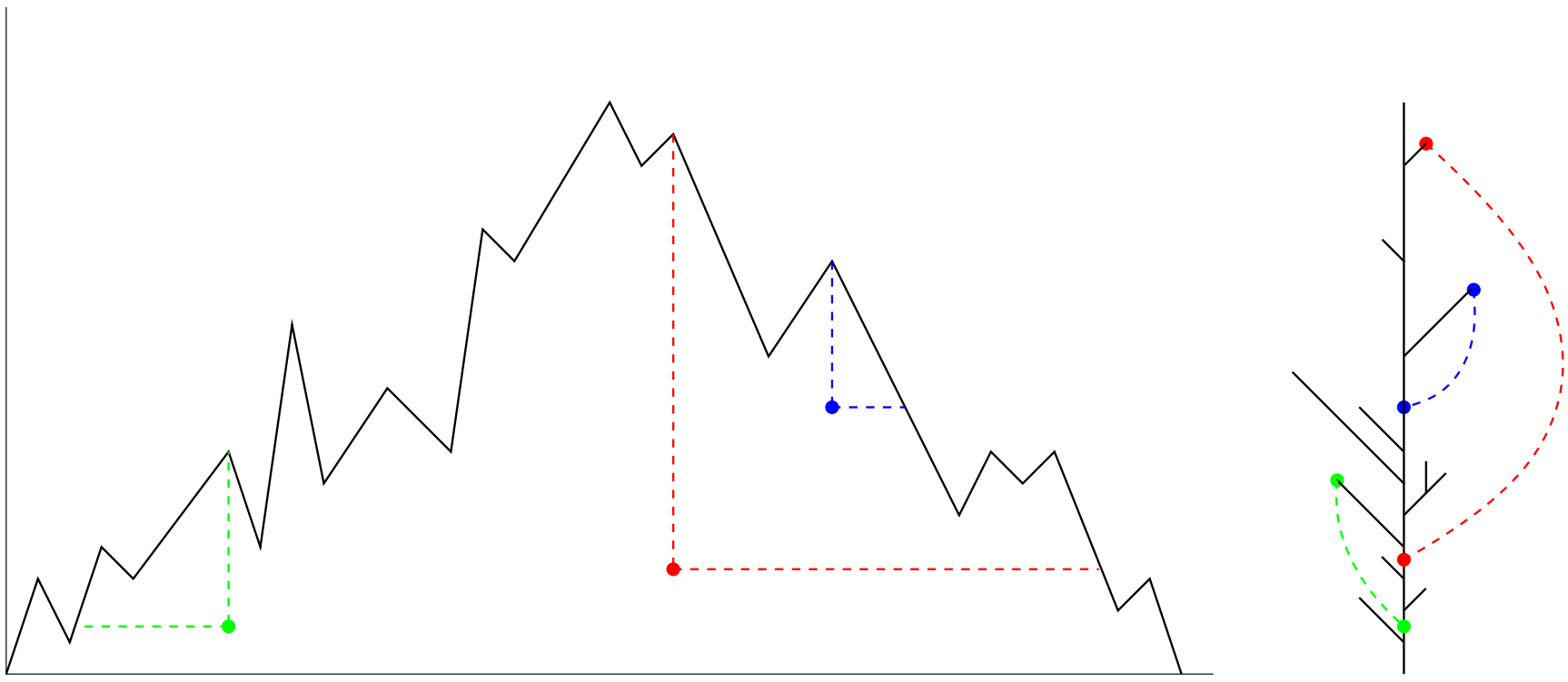
Critical random graph: depth-first walk

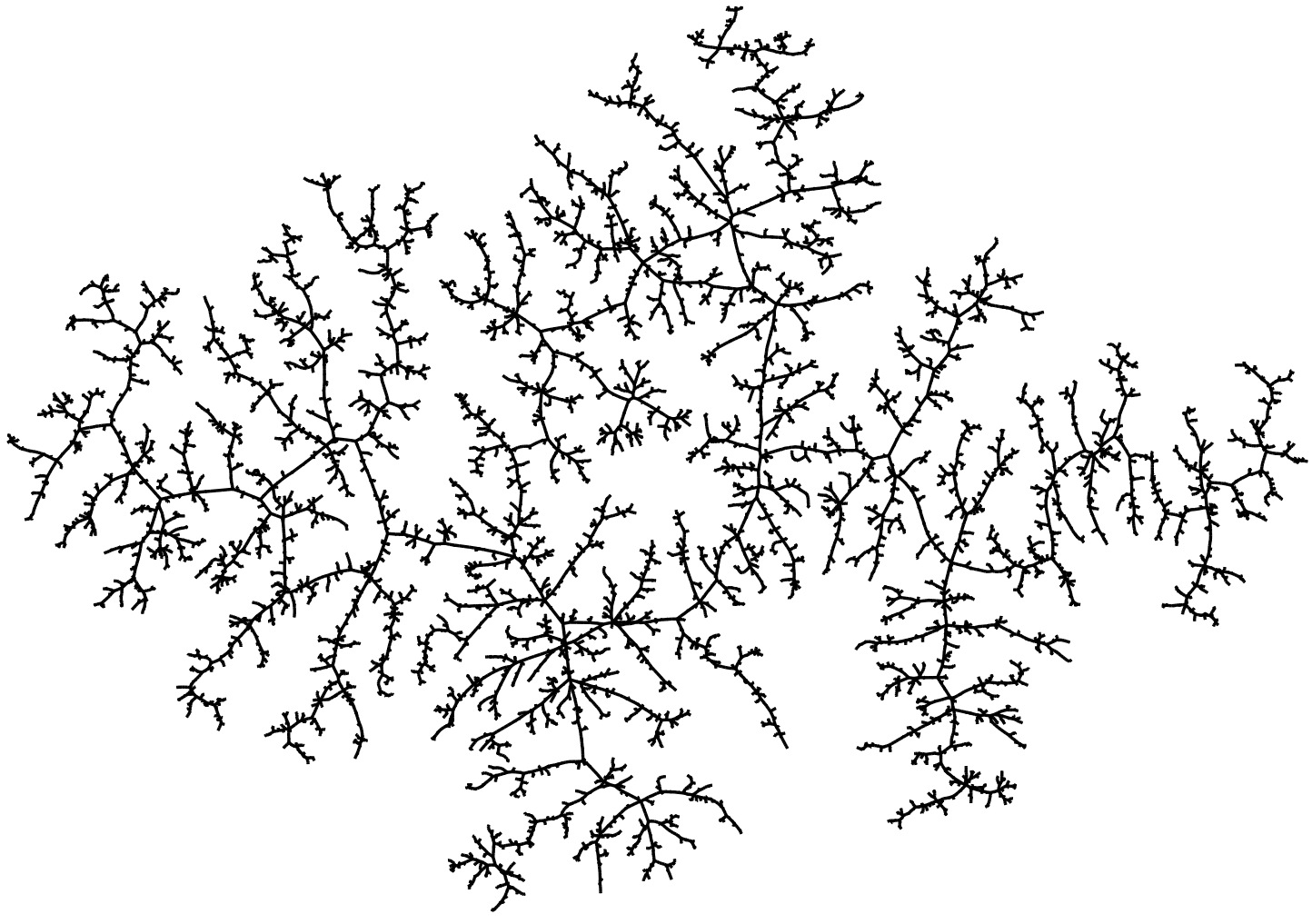


Critical random graph: depth-first walk



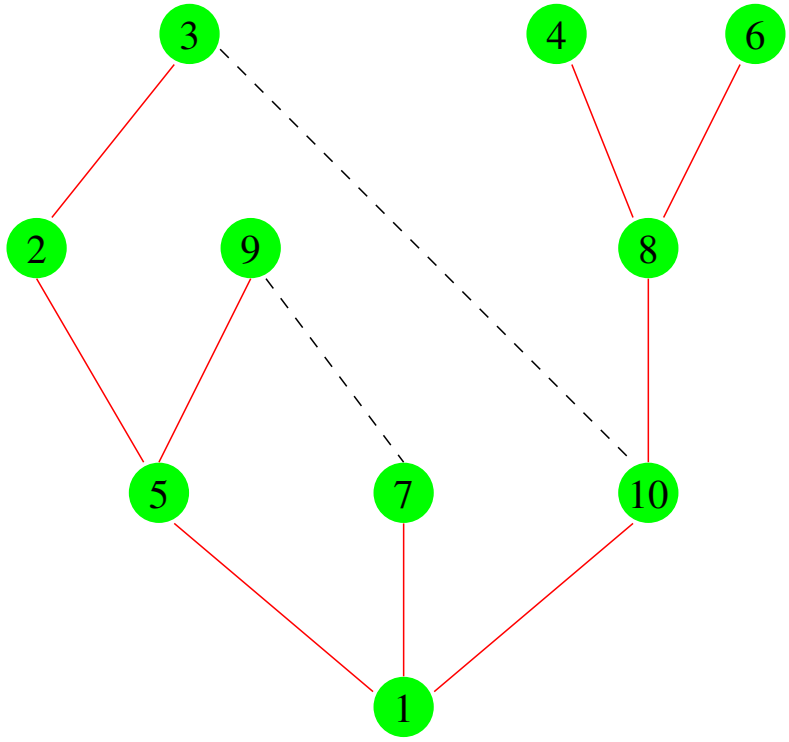
Vertex identifications



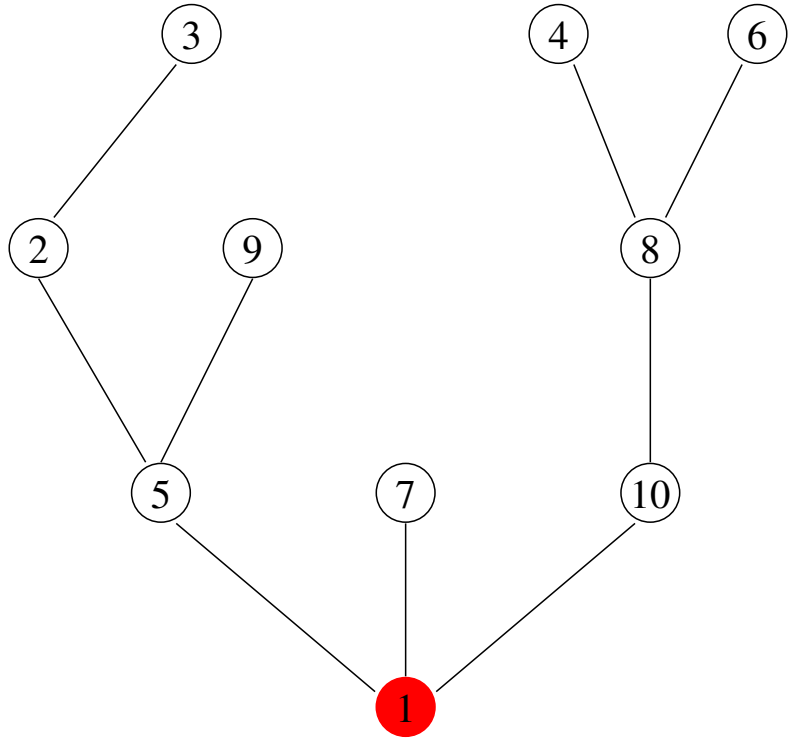


[Picture by Nicolas Broutin]

Depth-first tree

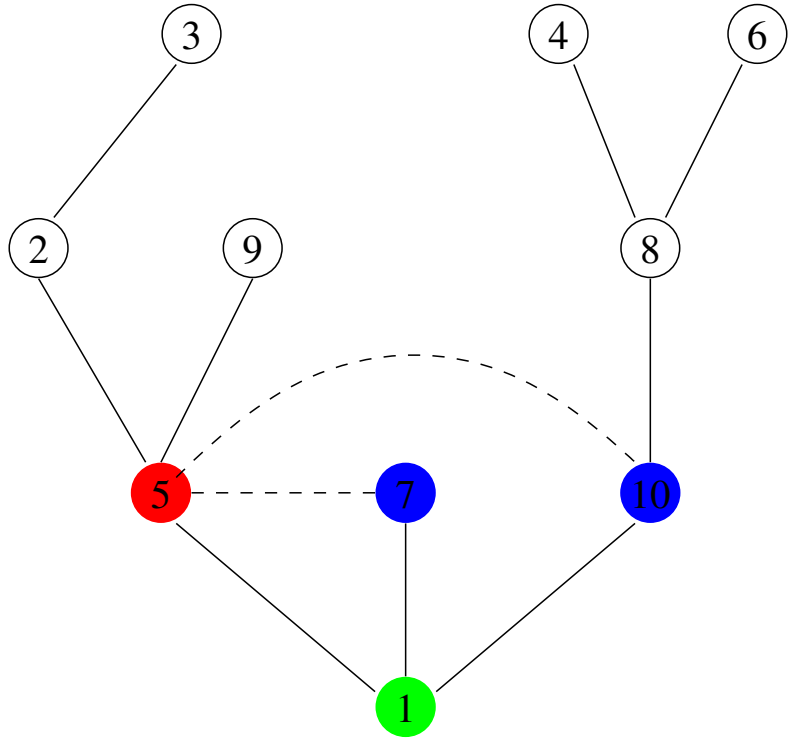


Depth-first walk and permitted edges



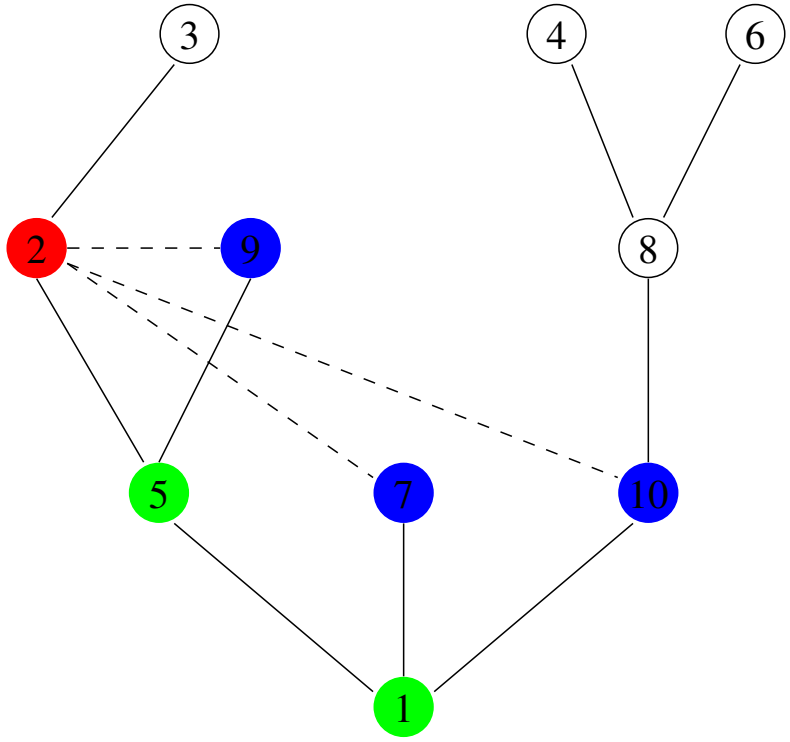
Step 0: $X(0) = 0$.

Depth-first walk and permitted edges



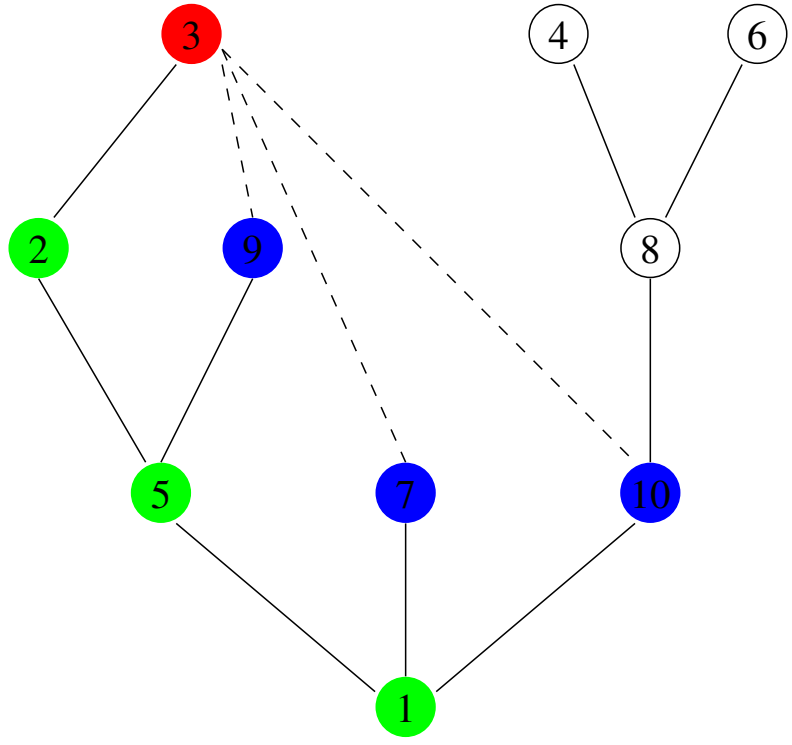
Step 1: $X(1) = 2$.

Depth-first walk and permitted edges



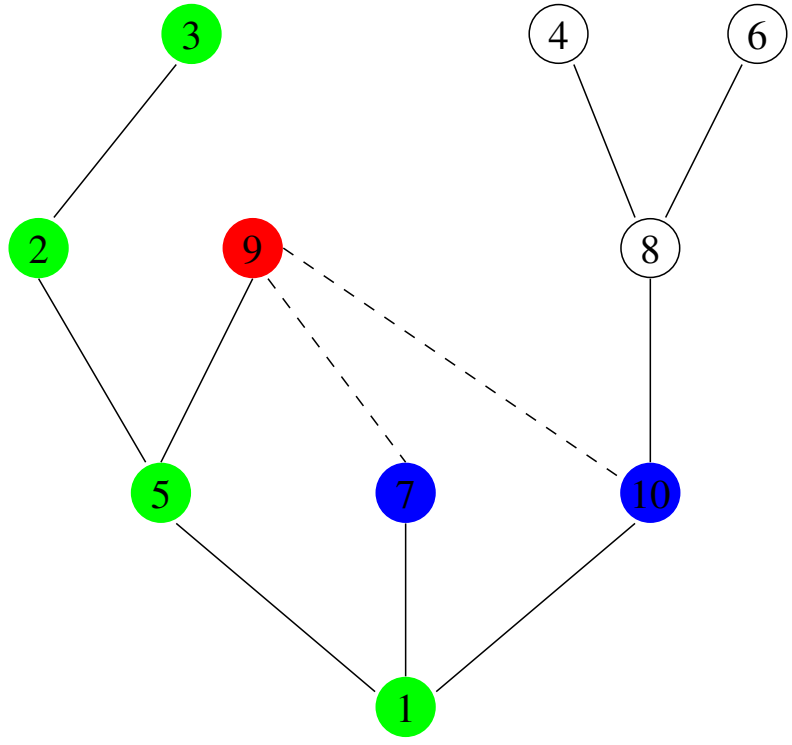
Step 2: $X(2) = 3$.

Depth-first walk and permitted edges



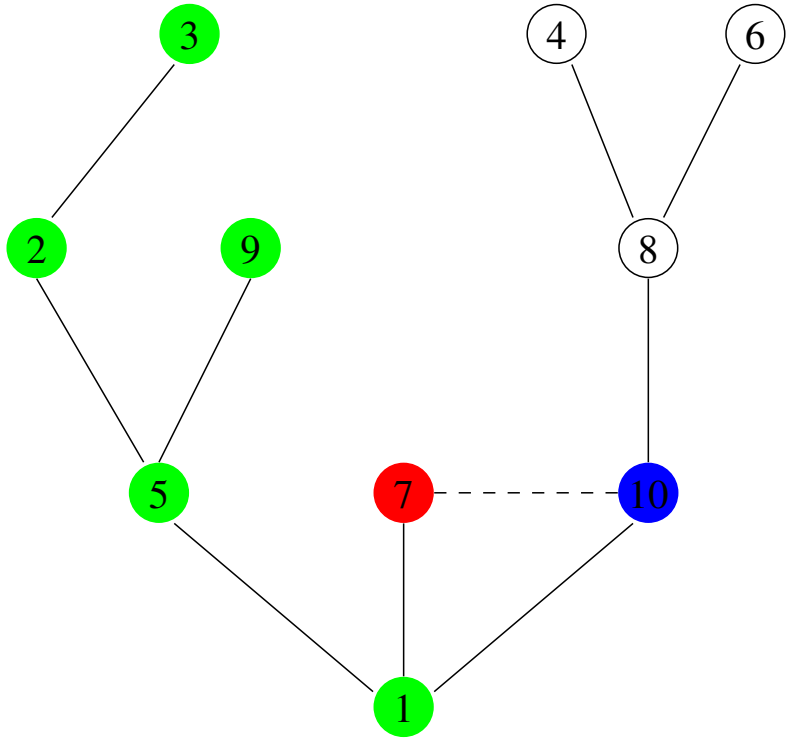
Step 3: $X(3) = 3$.

Depth-first walk and permitted edges



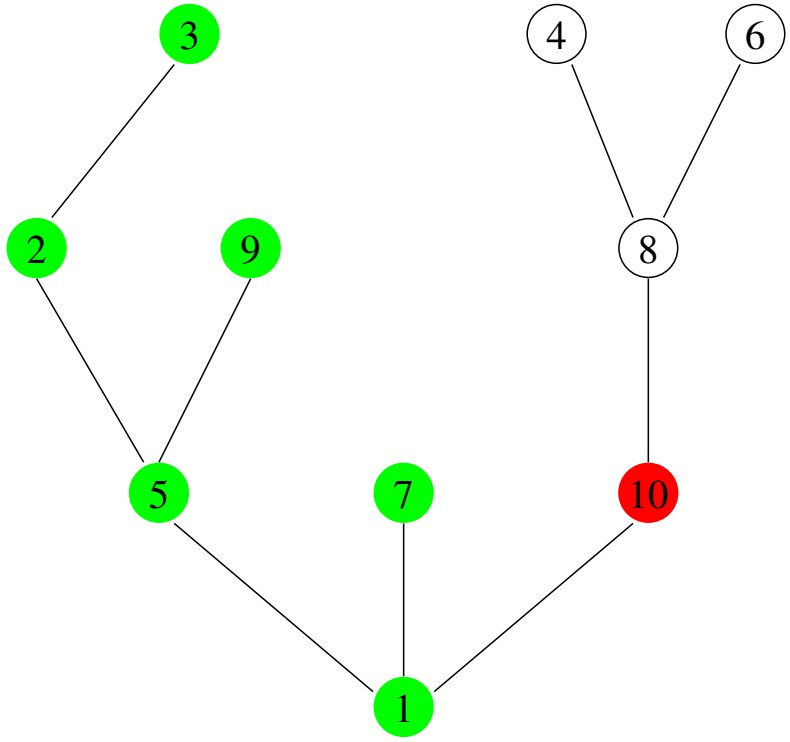
Step 4: $X(4) = 2$.

Depth-first walk and permitted edges



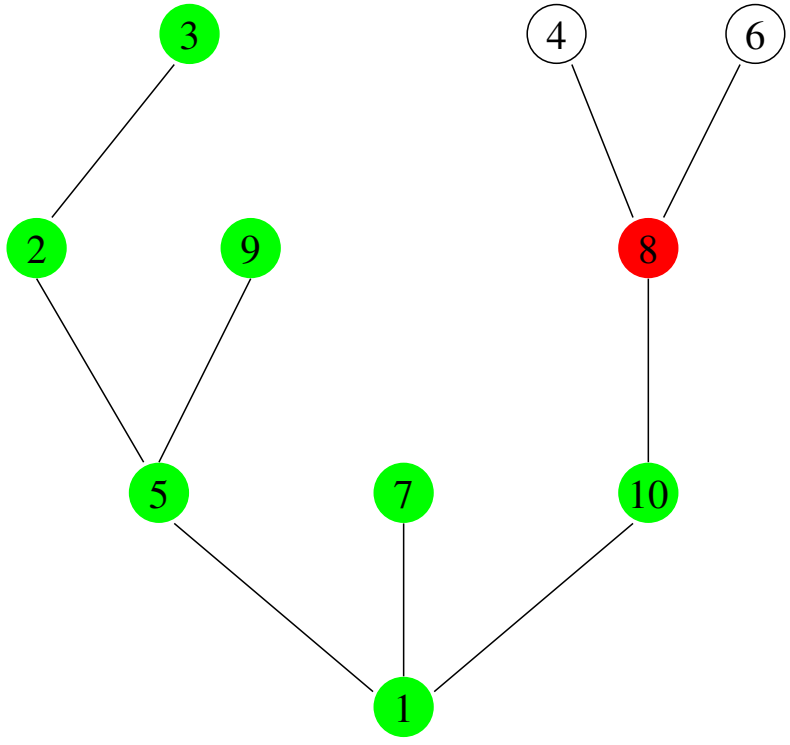
Step 5: $X(5) = 1$.

Depth-first walk and permitted edges



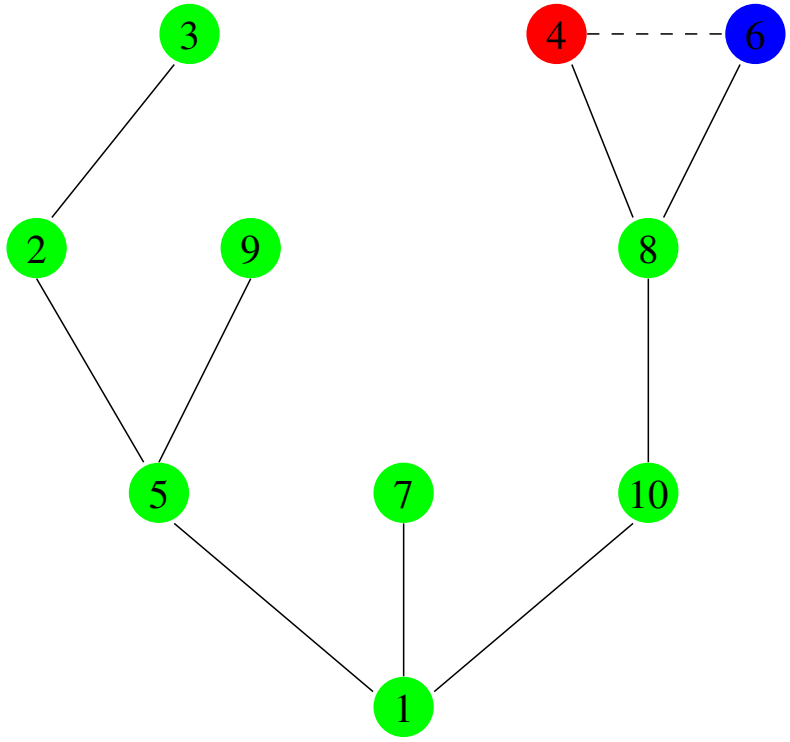
Step 6: $X(6) = 0$.

Depth-first walk and permitted edges



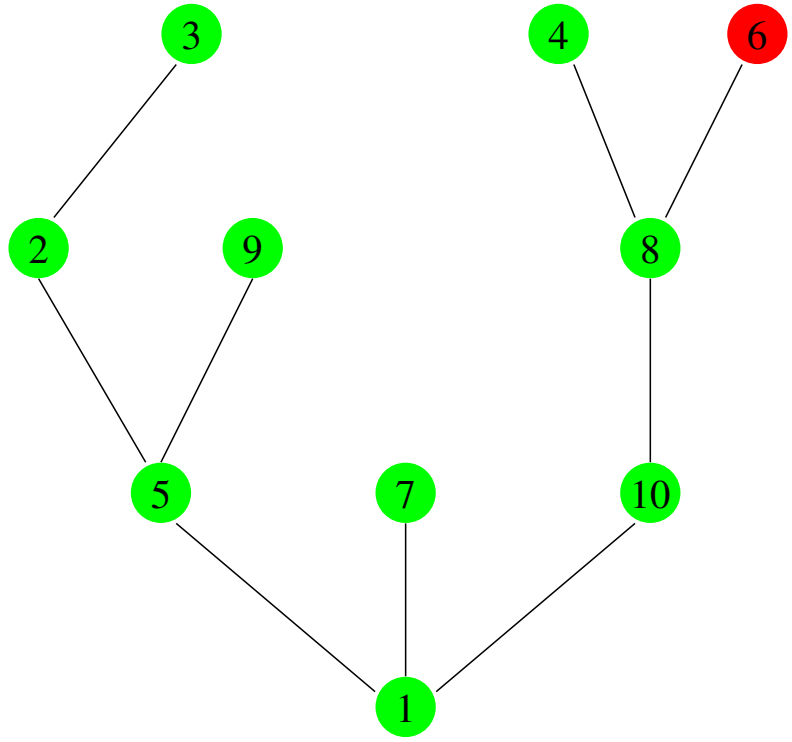
Step 7: $X(7) = 0$.

Depth-first walk and permitted edges



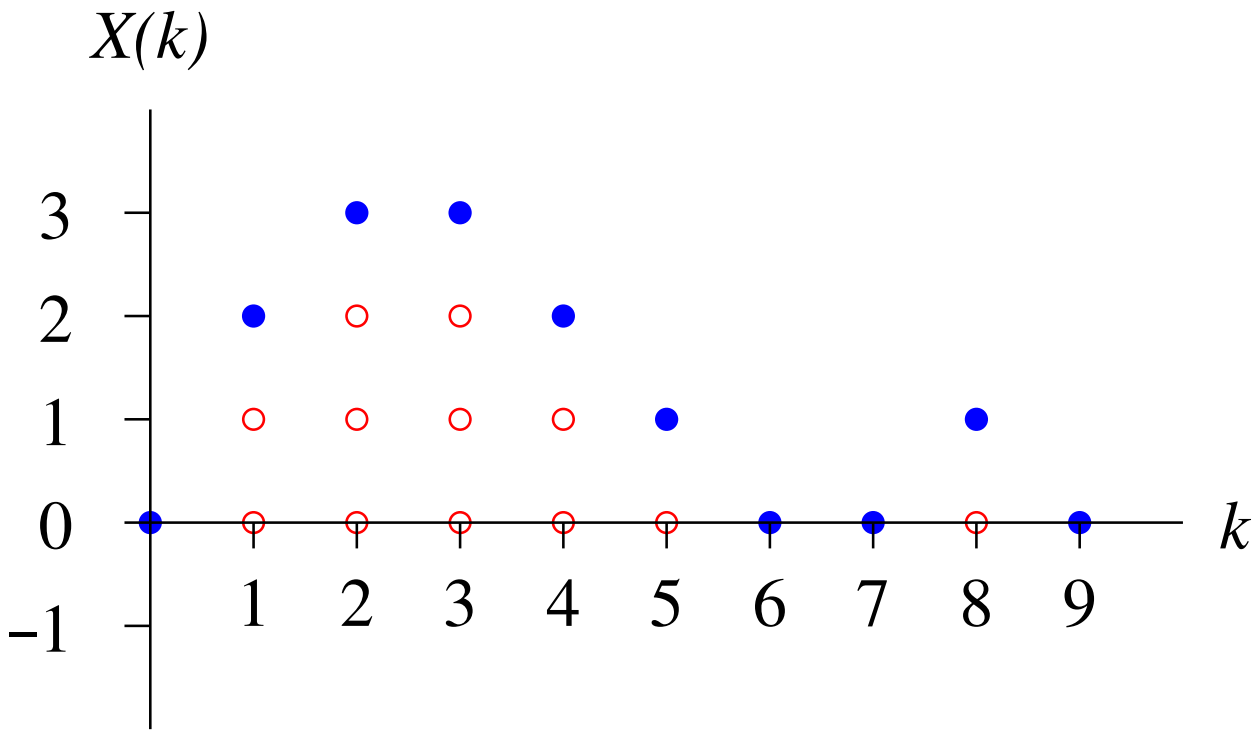
Step 8: $X(8) = 1$.

Depth-first walk and permitted edges

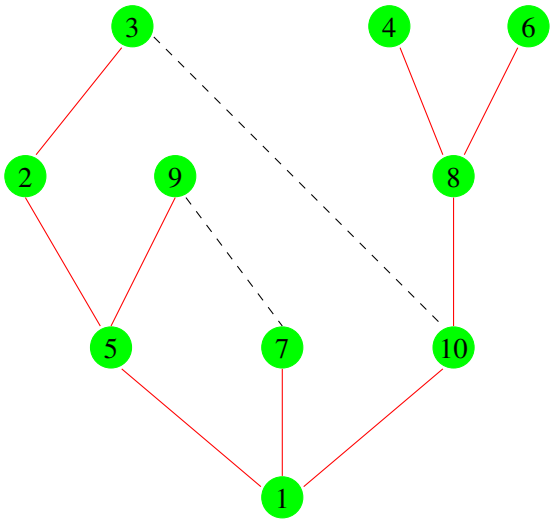


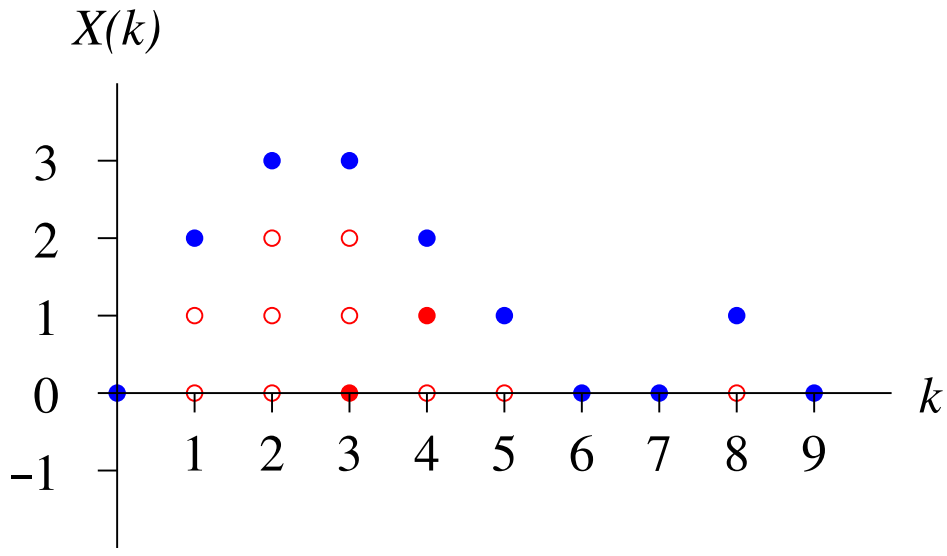
Step 10: $X(9) = 0$.

Area

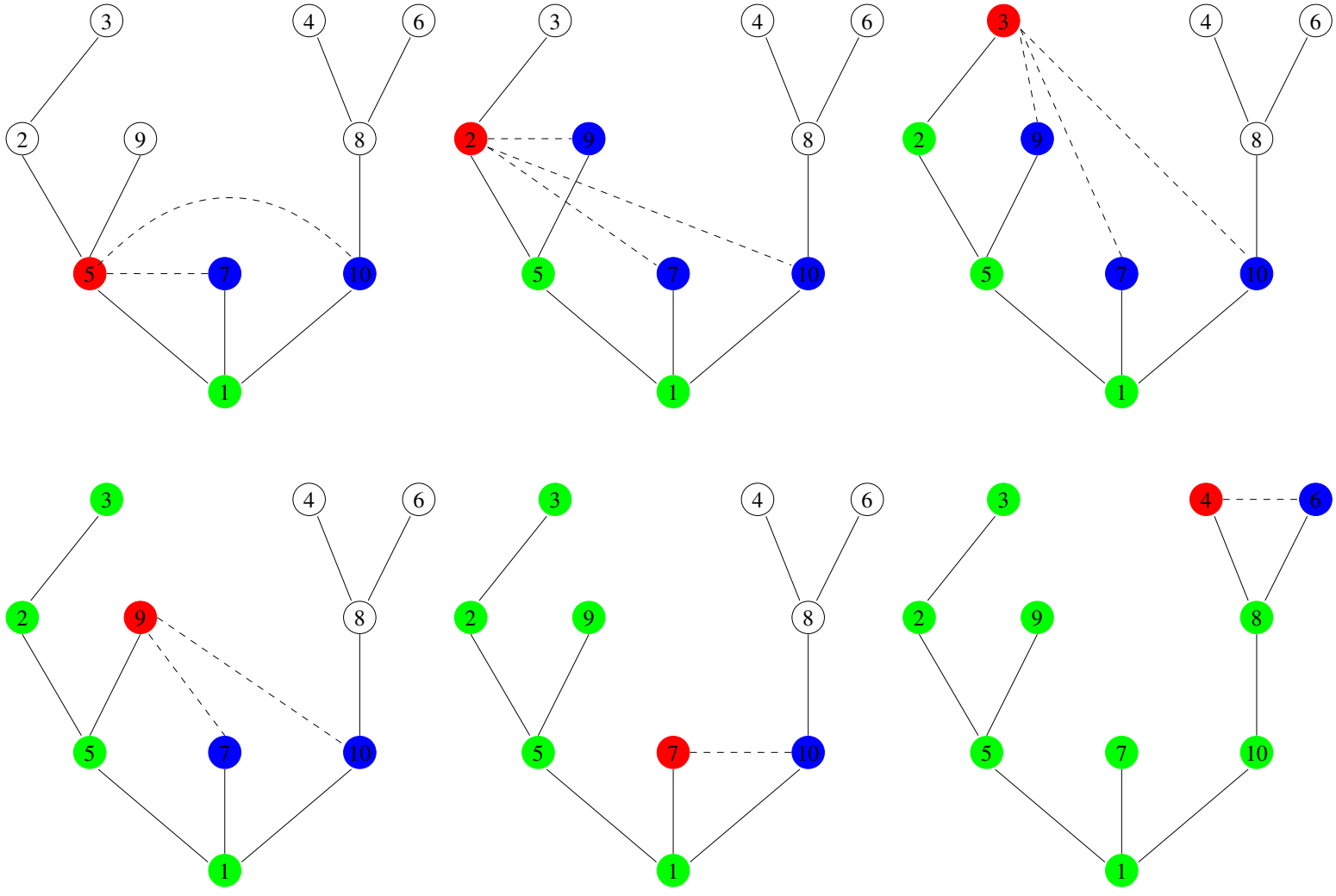


Surplus edges

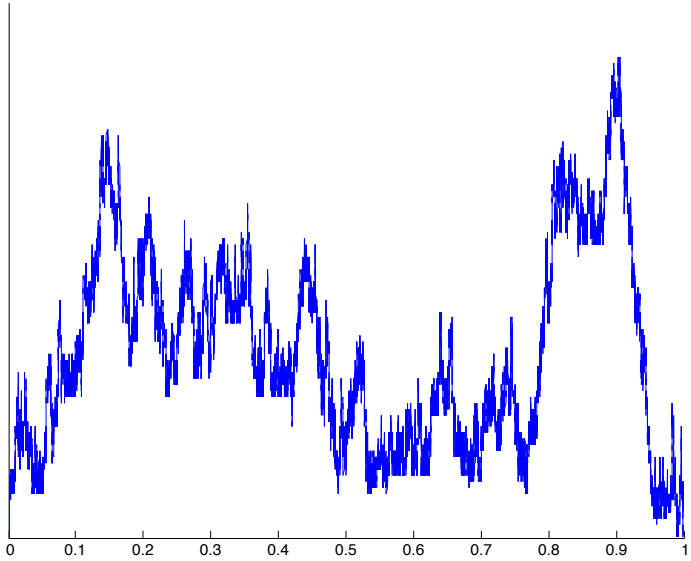


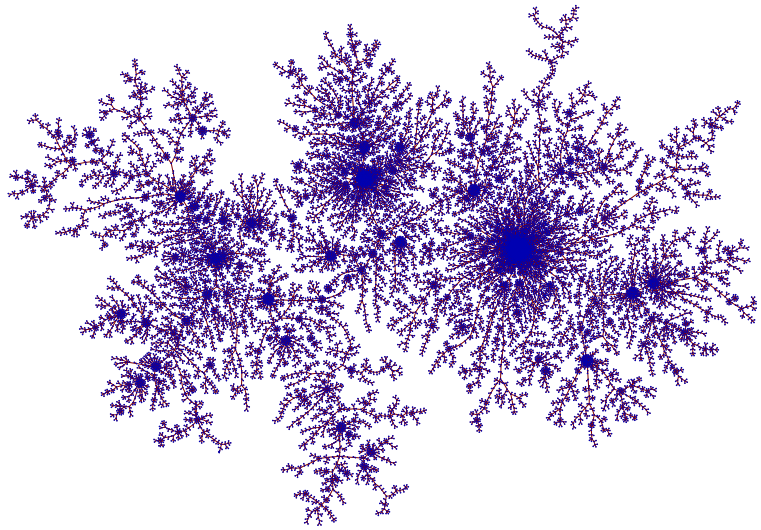


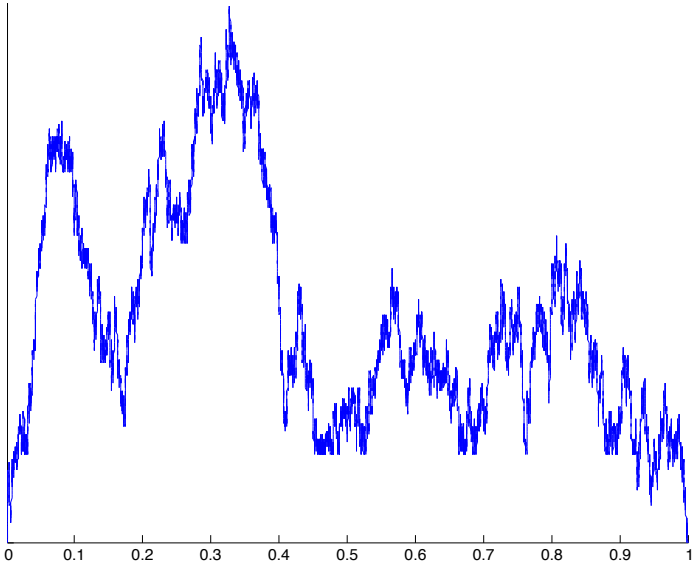
Surplus edges

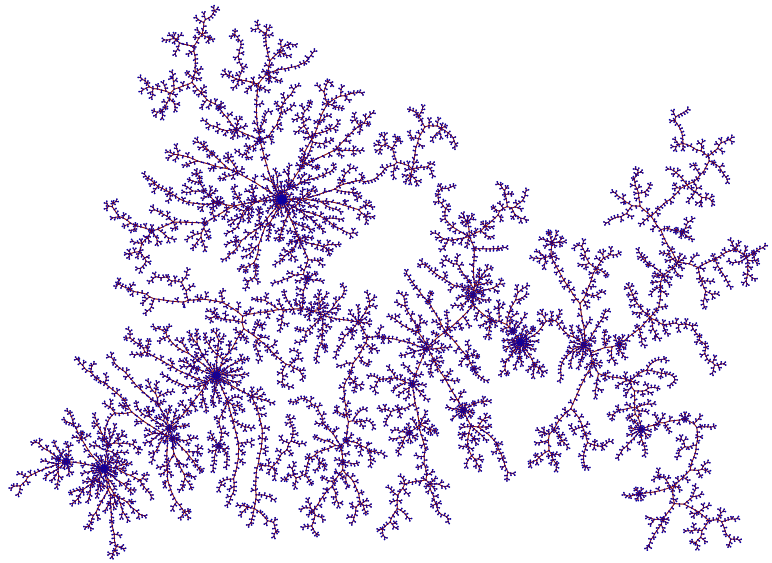


α-stable trees ($\alpha = 1.1$ and $\alpha = 1.5$)







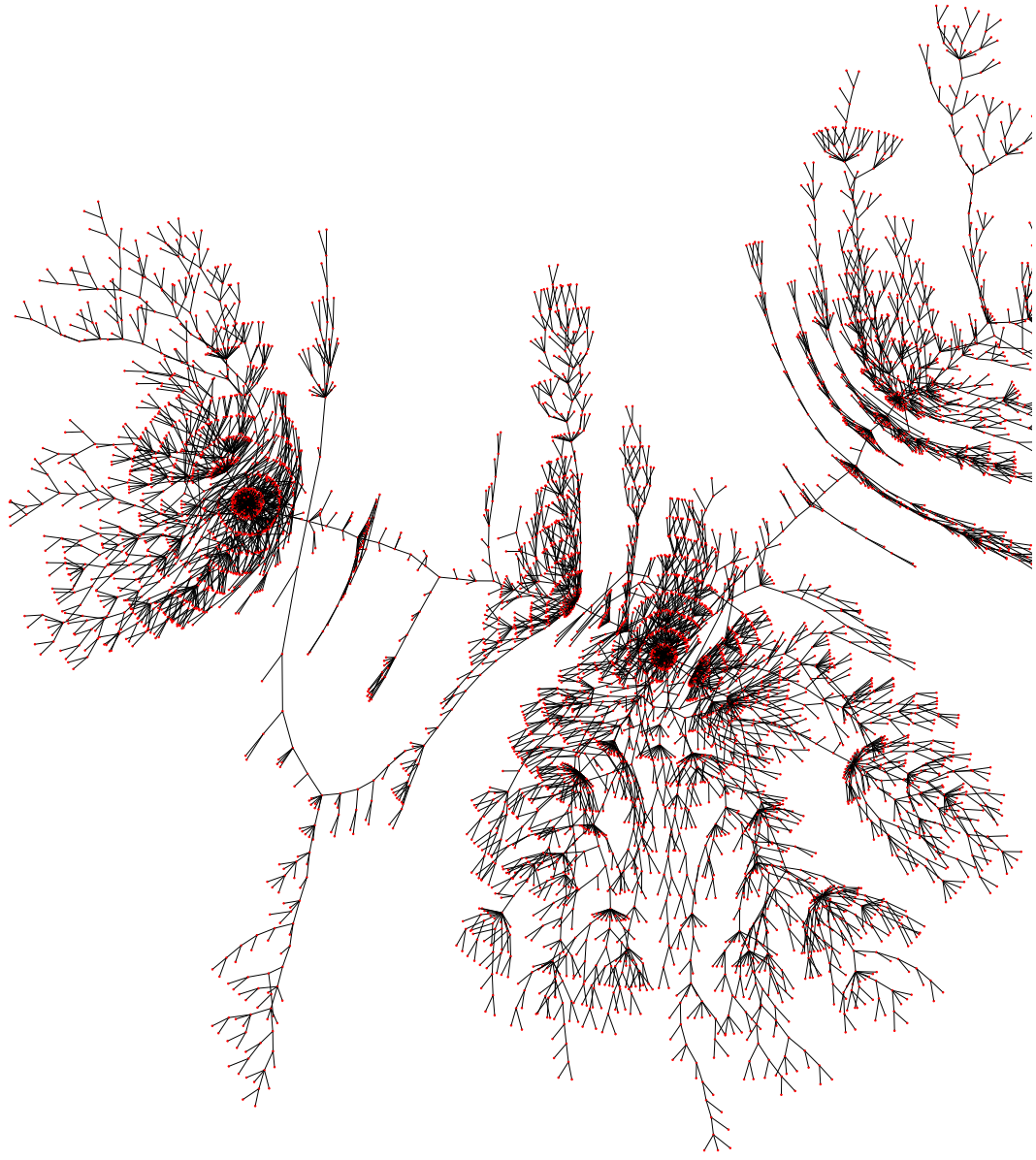


[Pictures by Igor Kortchemski]

Heavy-tailed configuration model, $\alpha = 1.8$

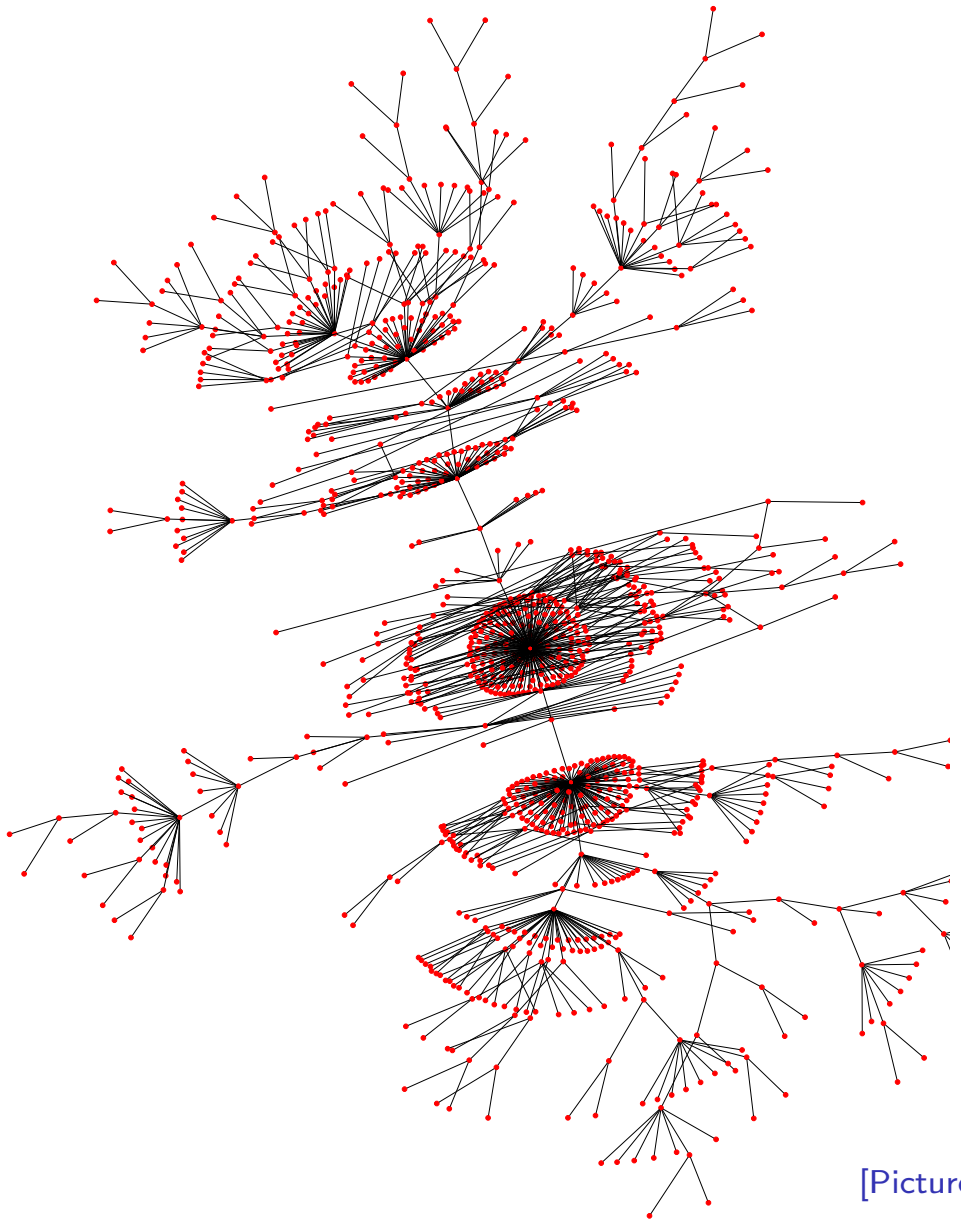
[Picture by Delphin Sénizergues]

Heavy-tailed configuration model, $\alpha = 1.5$



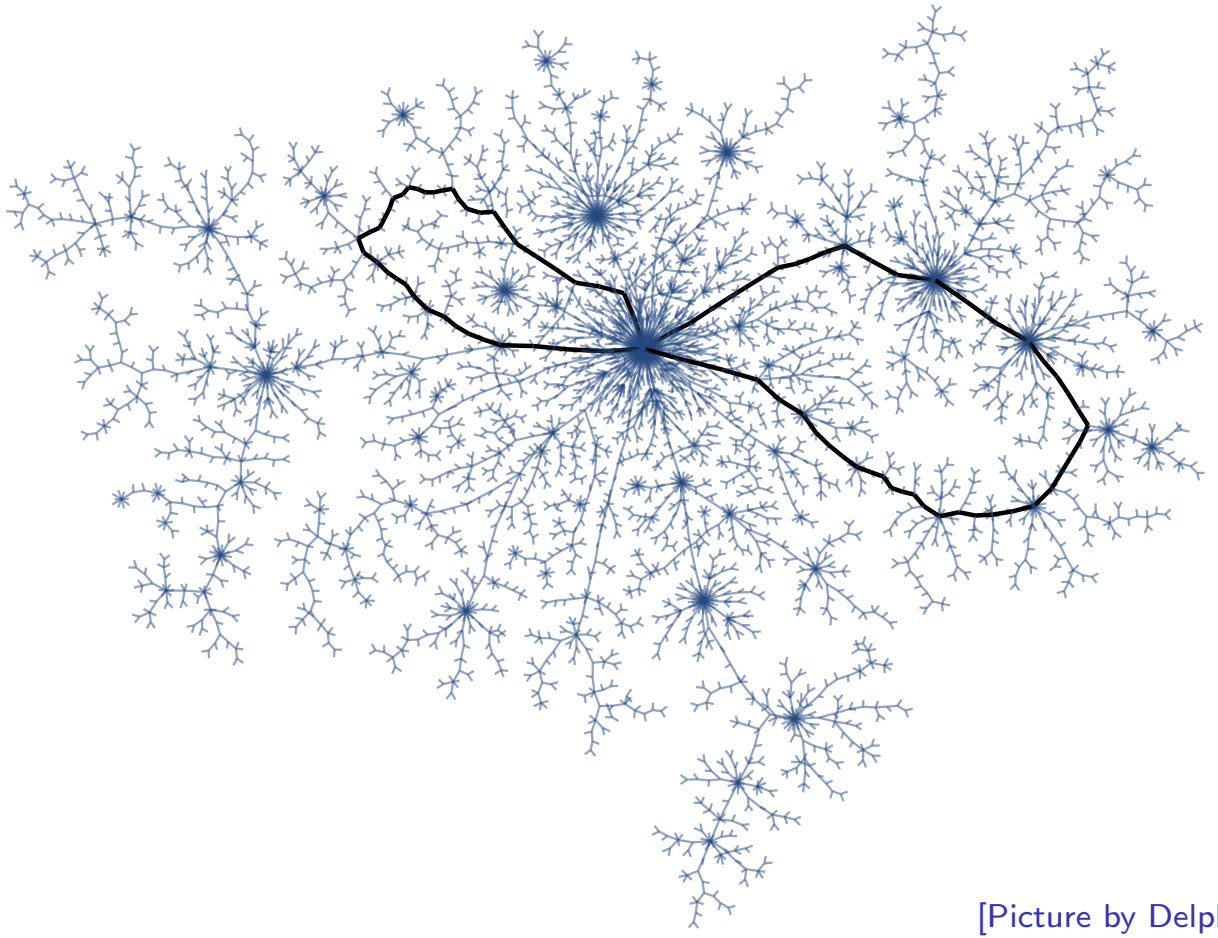
[Picture by Delphin Sénizergues]

Heavy-tailed configuration model, $\alpha = 1.2$



[Picture by Delphin Sénizergues]

Stable graph, $\alpha = 1.5$



[Picture by Delphin Sénizergues]