

Analyses de Robustesse: Graphe valué par le nombre de voies et zone sans pont

Casser des Graphes

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May 2, 2024

Complex Networks - LIP6

Outline

Quelques scores et distributions

Ordre eBC

Ordre freq

Ordre eBC sur deux coupes particulières

Coupe 24

Coupe 141

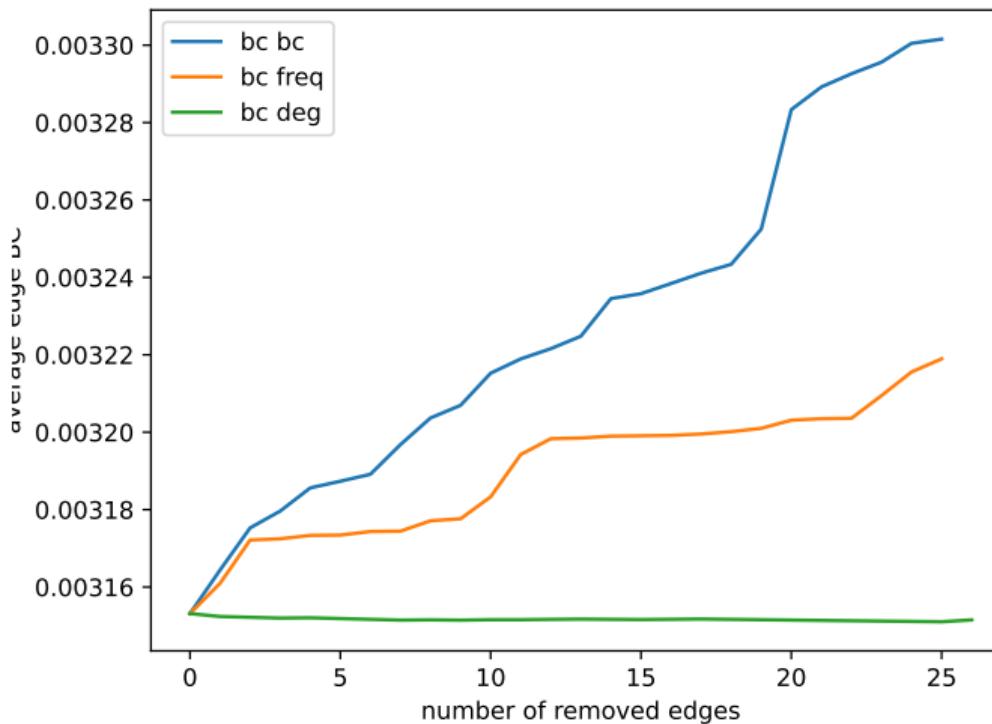
Comparaisons

zones sans pont

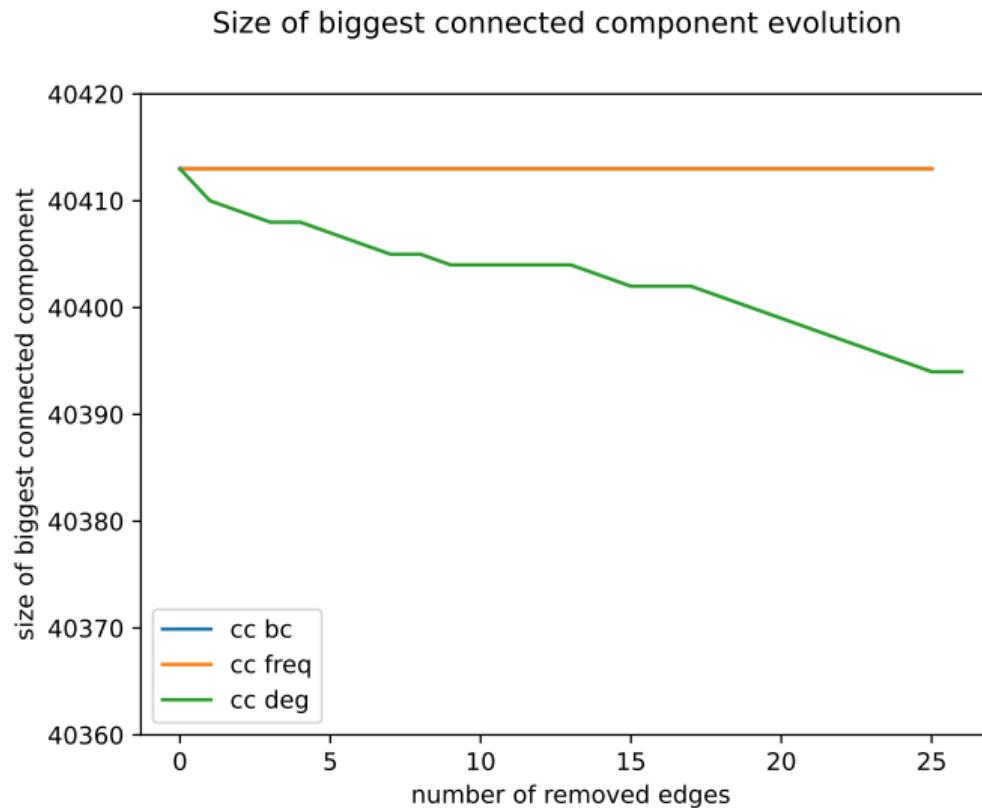
Quelques scores et distributions

Score: moyenne edge Betweenness Centrality

Average eBC evolution for 3 different attacks

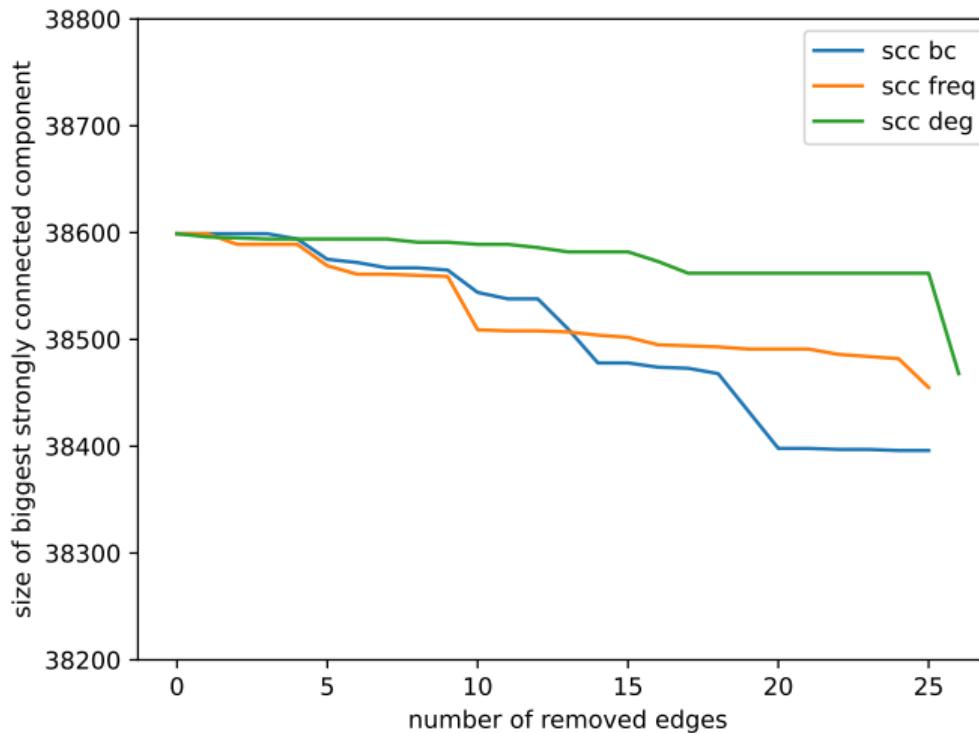


Score: plus grande composante connexe

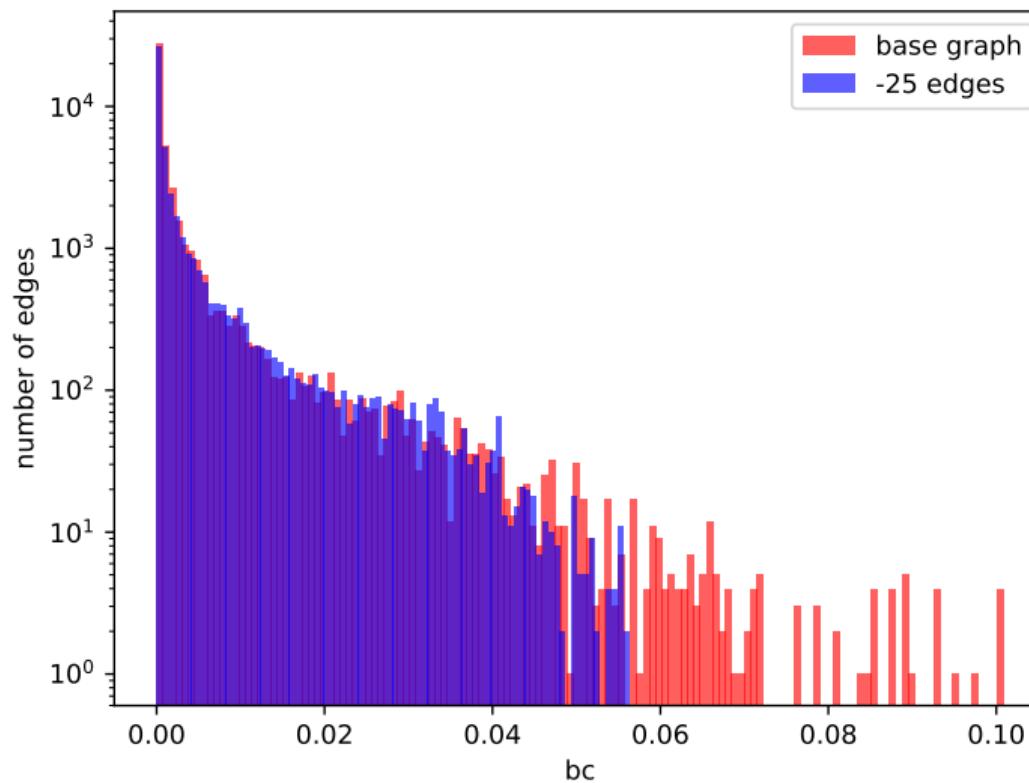


Score: plus grande composante fortement connexe

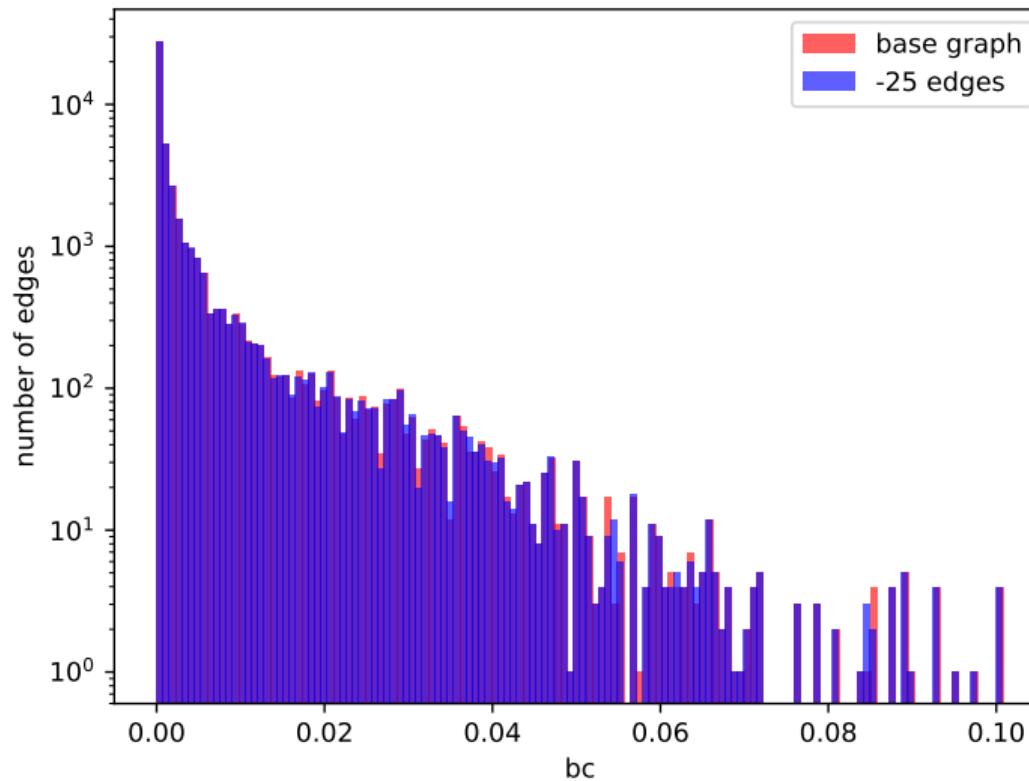
Size of biggest strongly connected component evolution



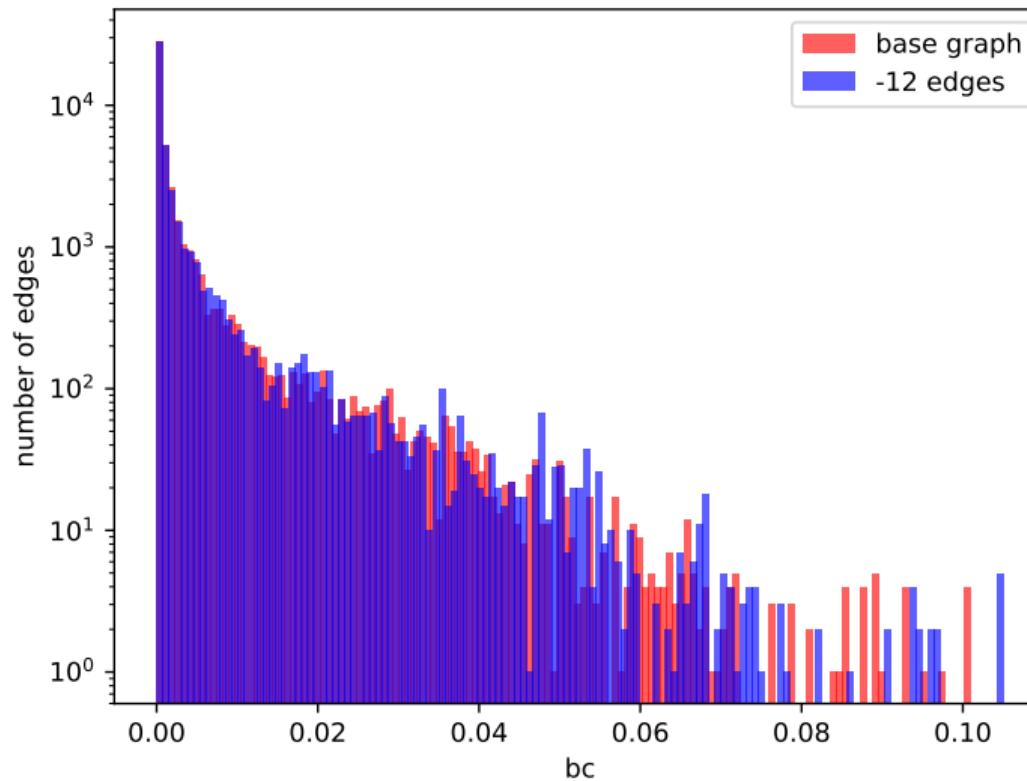
Ordre eBC: changements de distributions après 25 arêtes enlevées



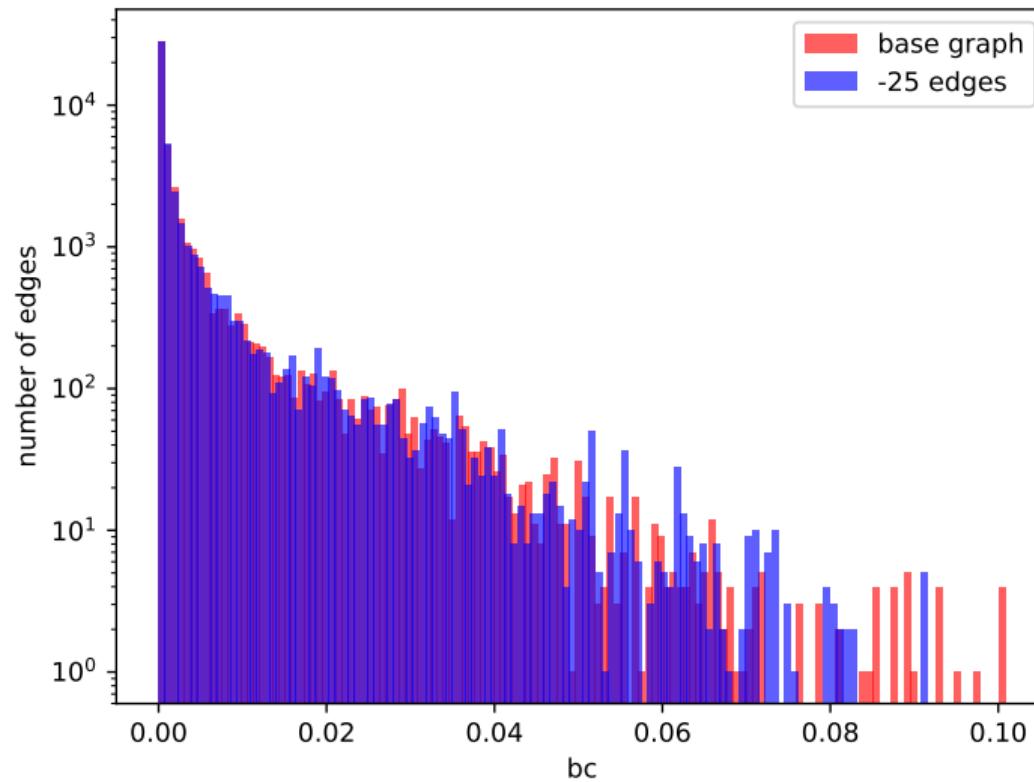
Ordre deg: changements de distributions après 25 arêtes enlevées



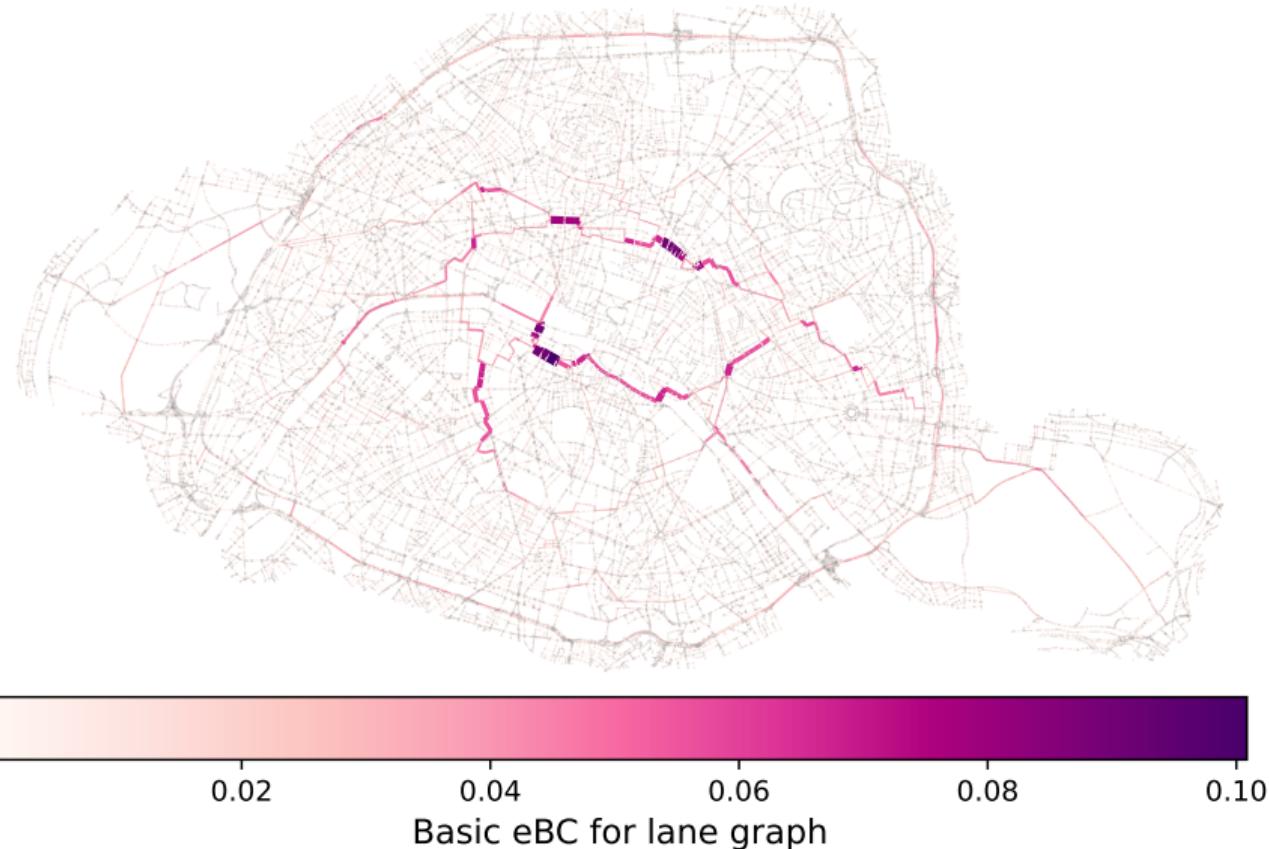
Ordre freq: changements de distributions après 12 arêtes enlevées



Ordre freq: changements de distributions après 25 arêtes enlevées

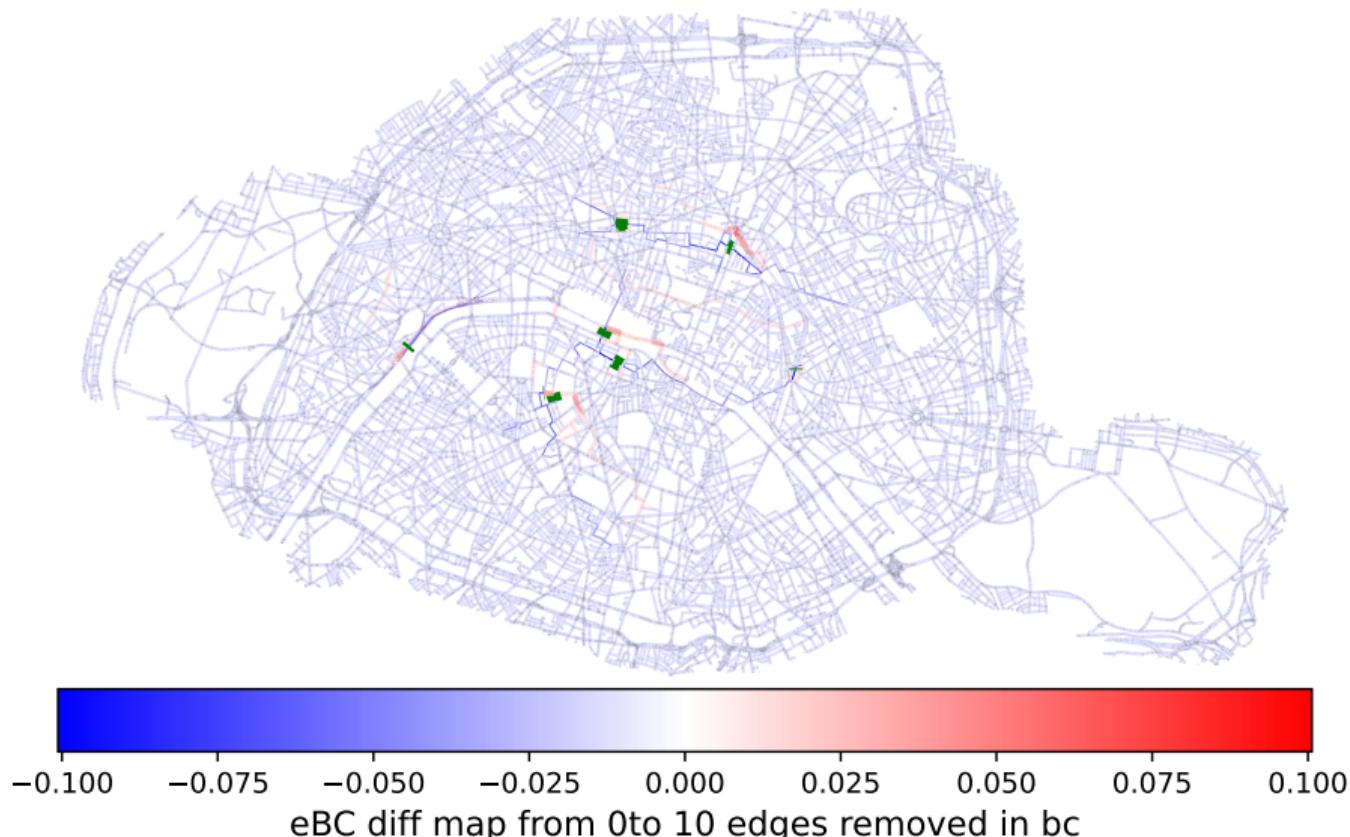


Visuel eBC de base

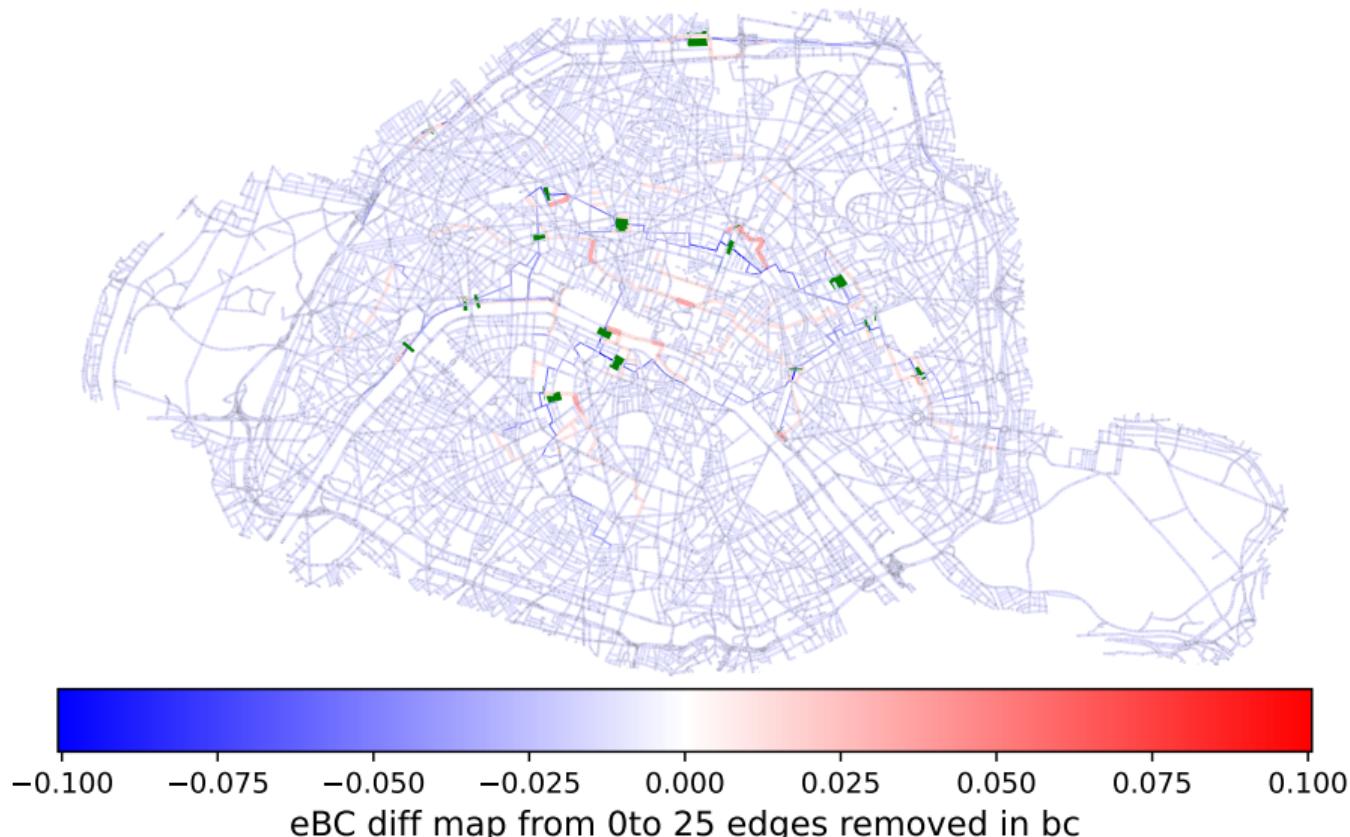


Ordre eBC

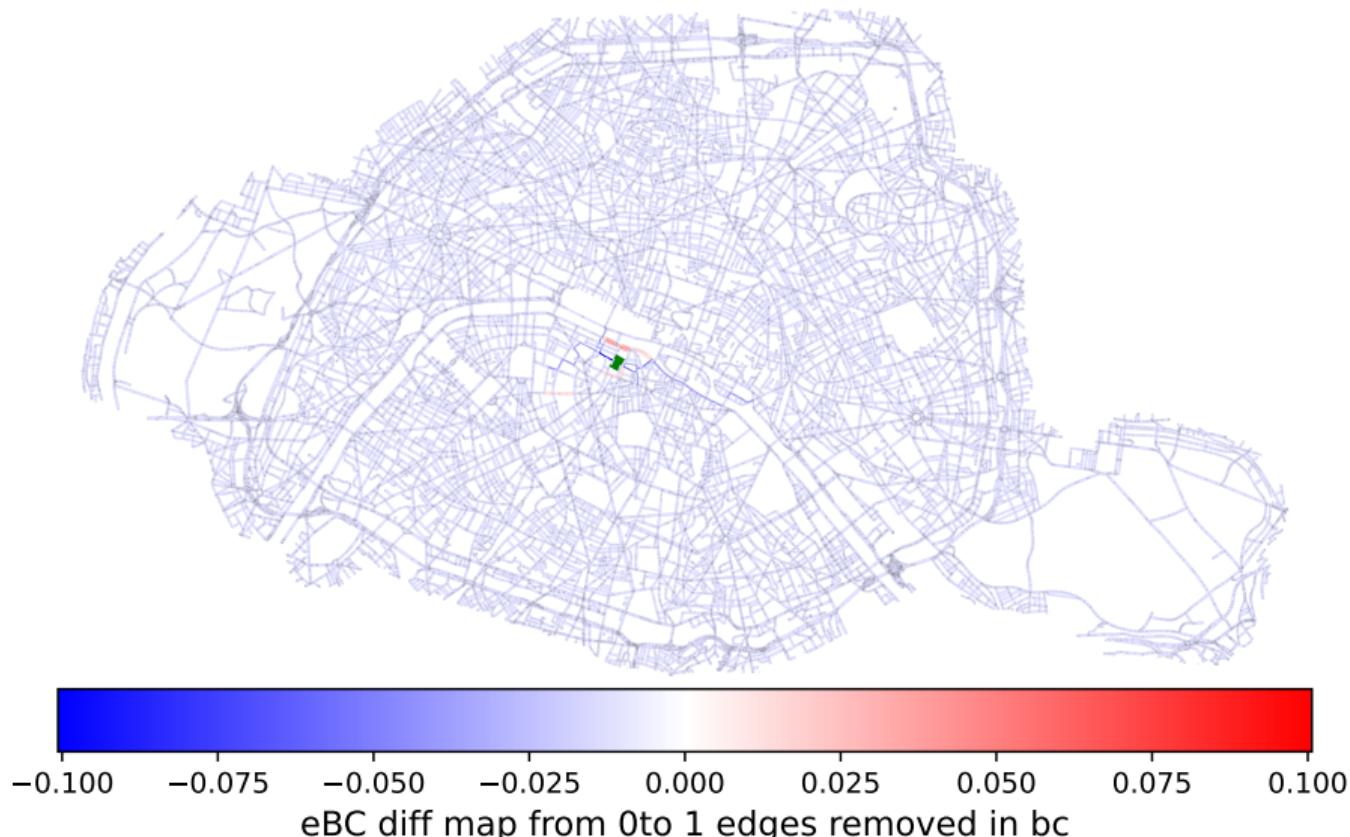
Des coupes similaires au nocost



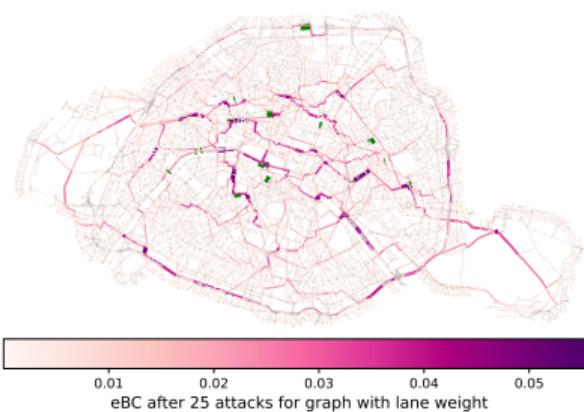
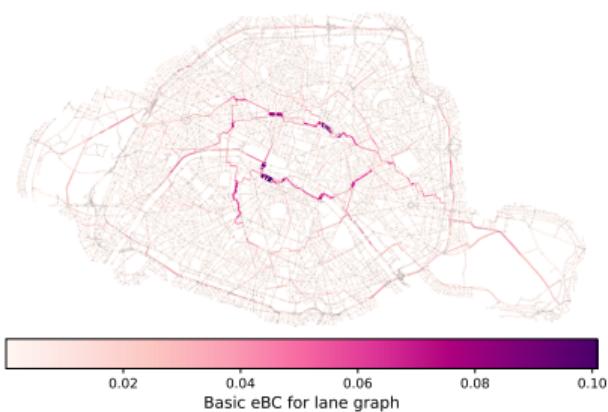
Et toujours les mêmes phénomènes observés



Mais pas d'aggravation importante des perturbations

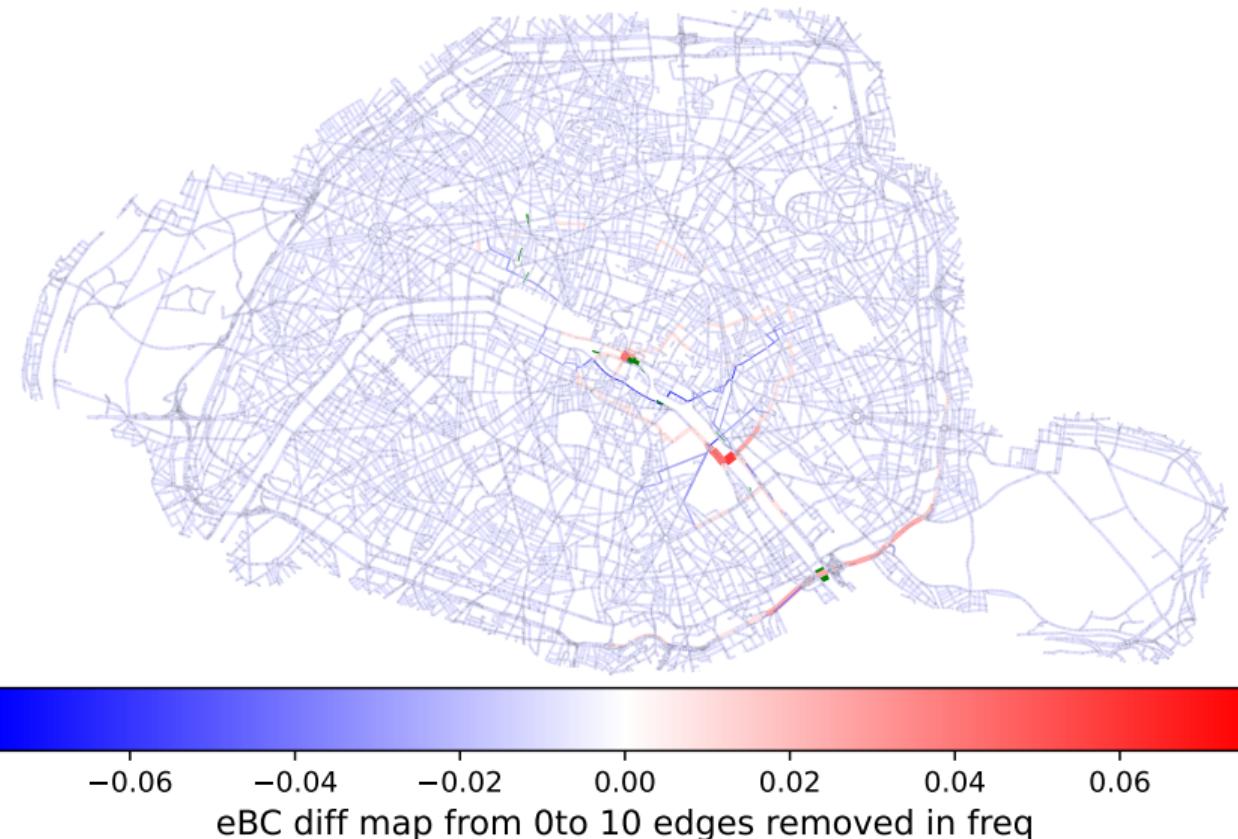


Avant / après

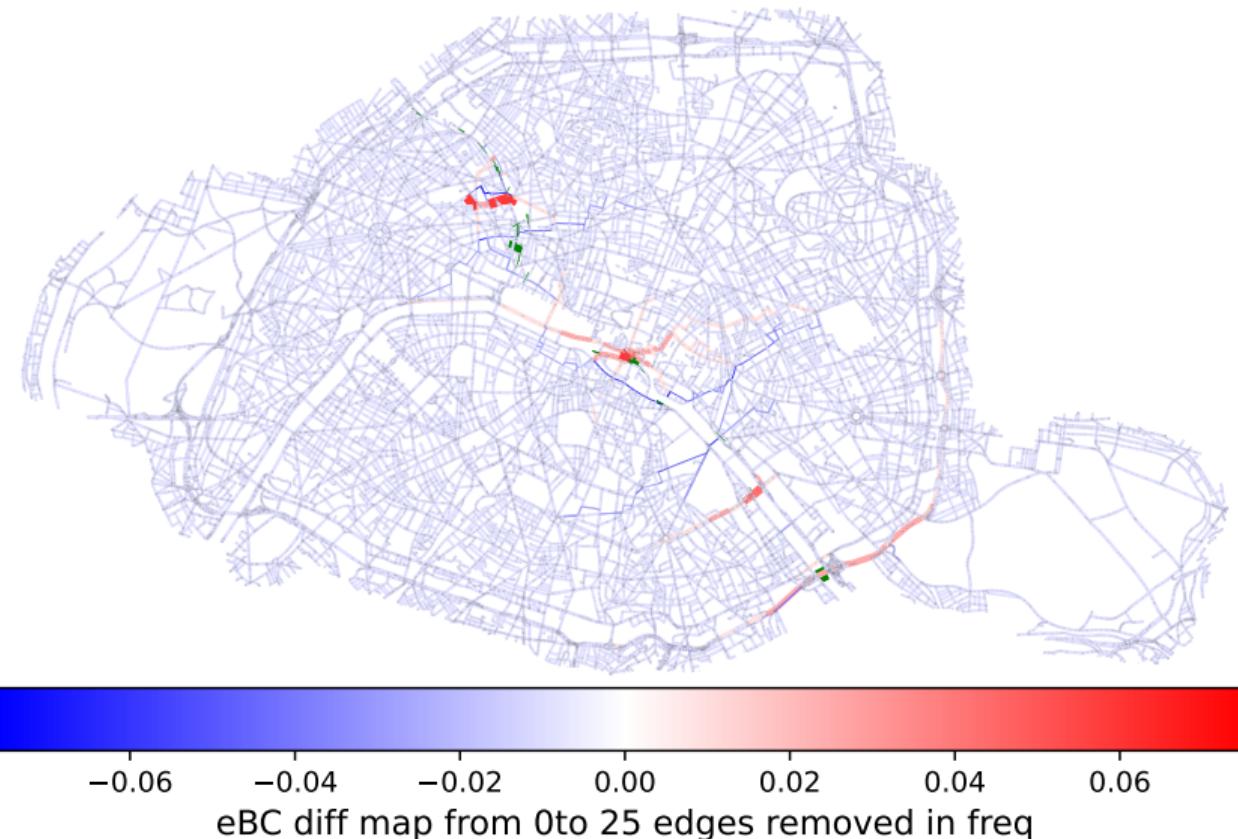


Ordre freq

Lorsque le blocage devient conséquent (1)

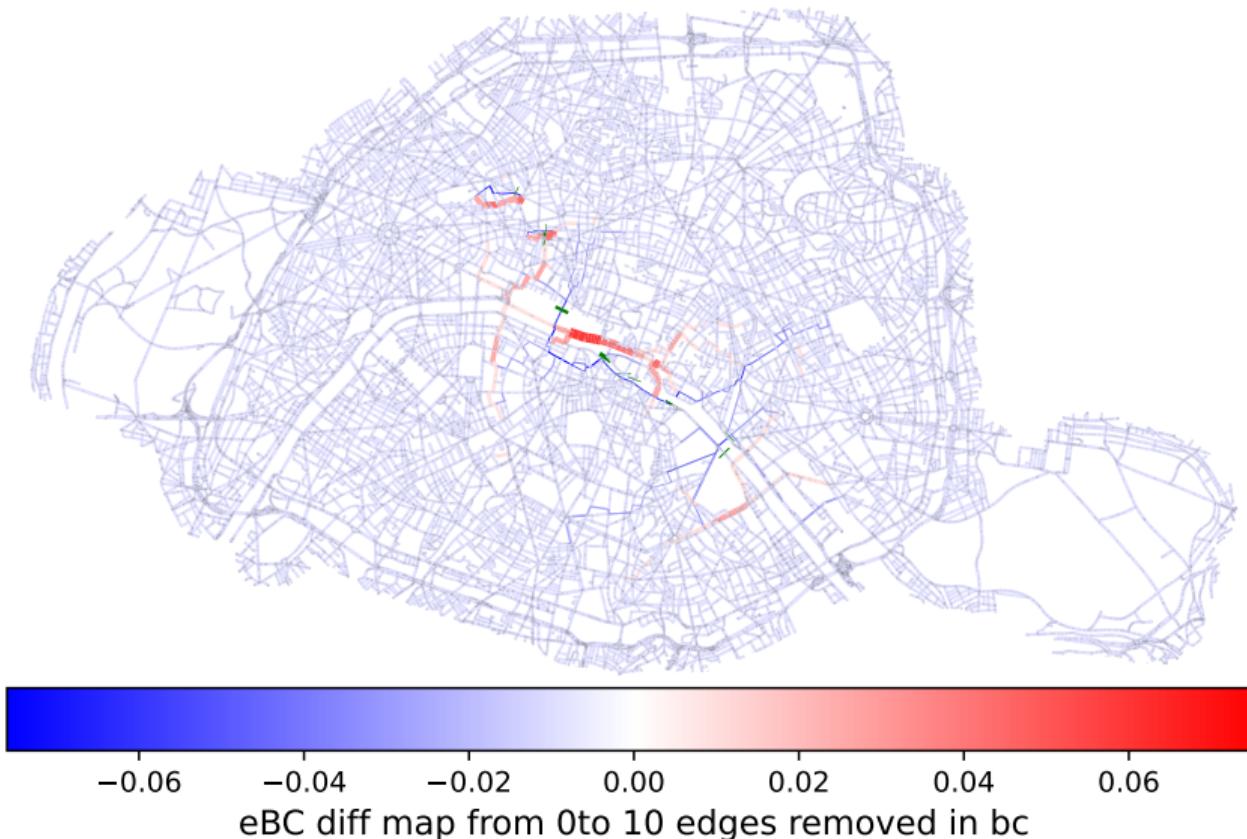


Lorsque le blocage devient conséquent (2)

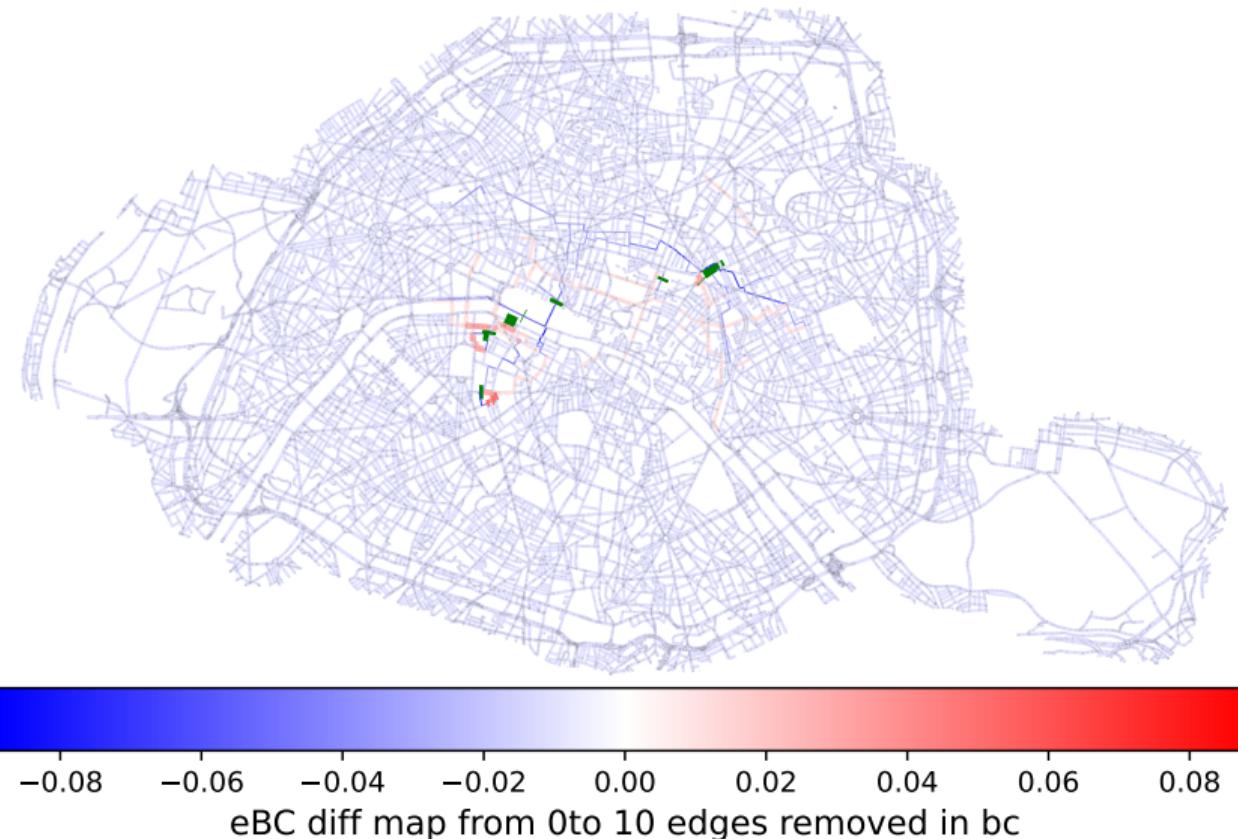


Ordre eBC sur deux coupes particulières

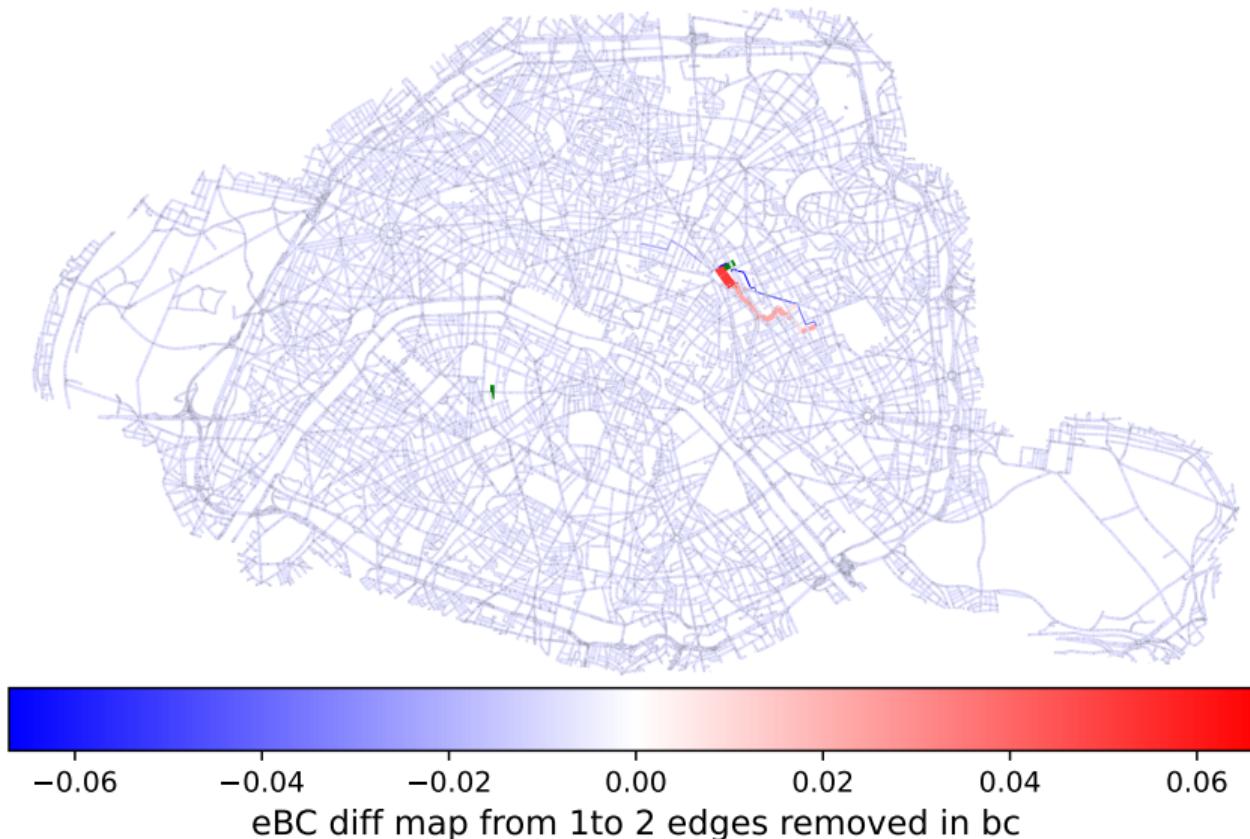
Similaire à ce qu'on connaît, mais efficace



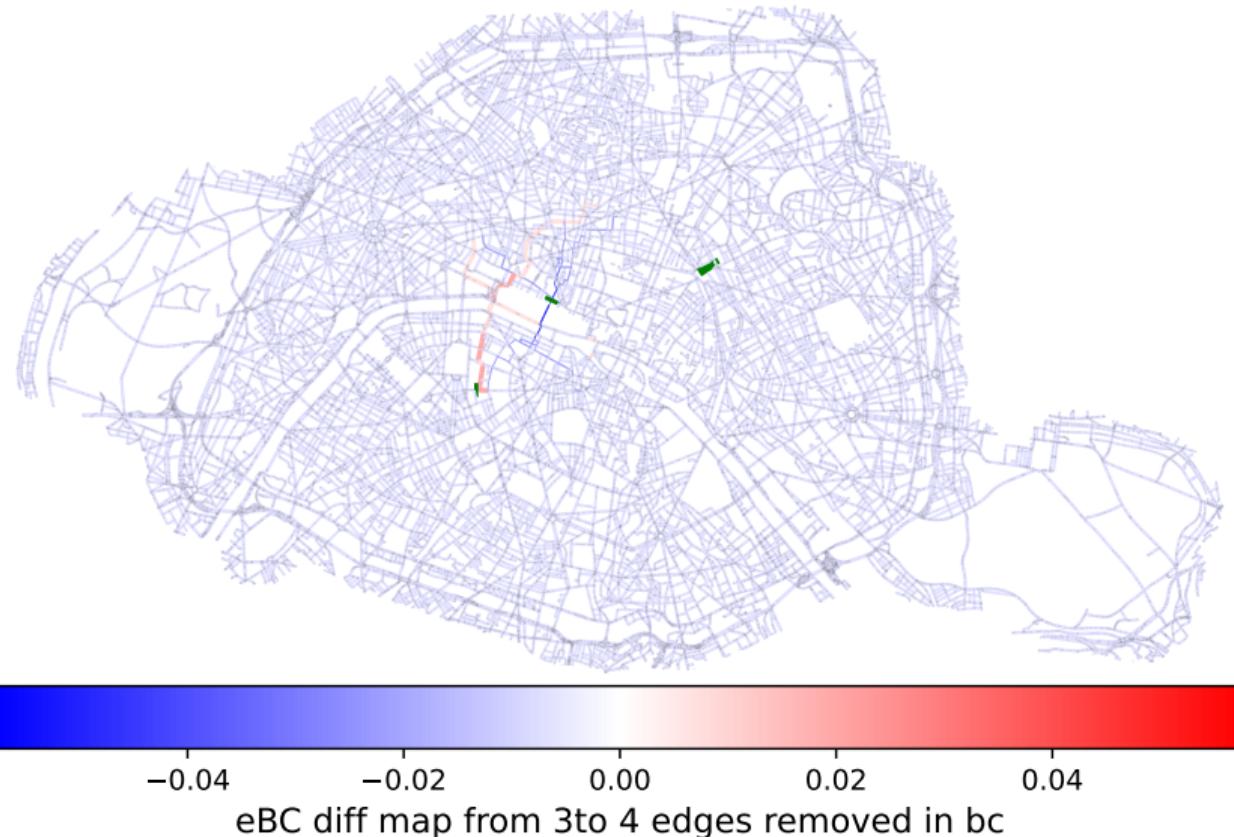
une coupe différente



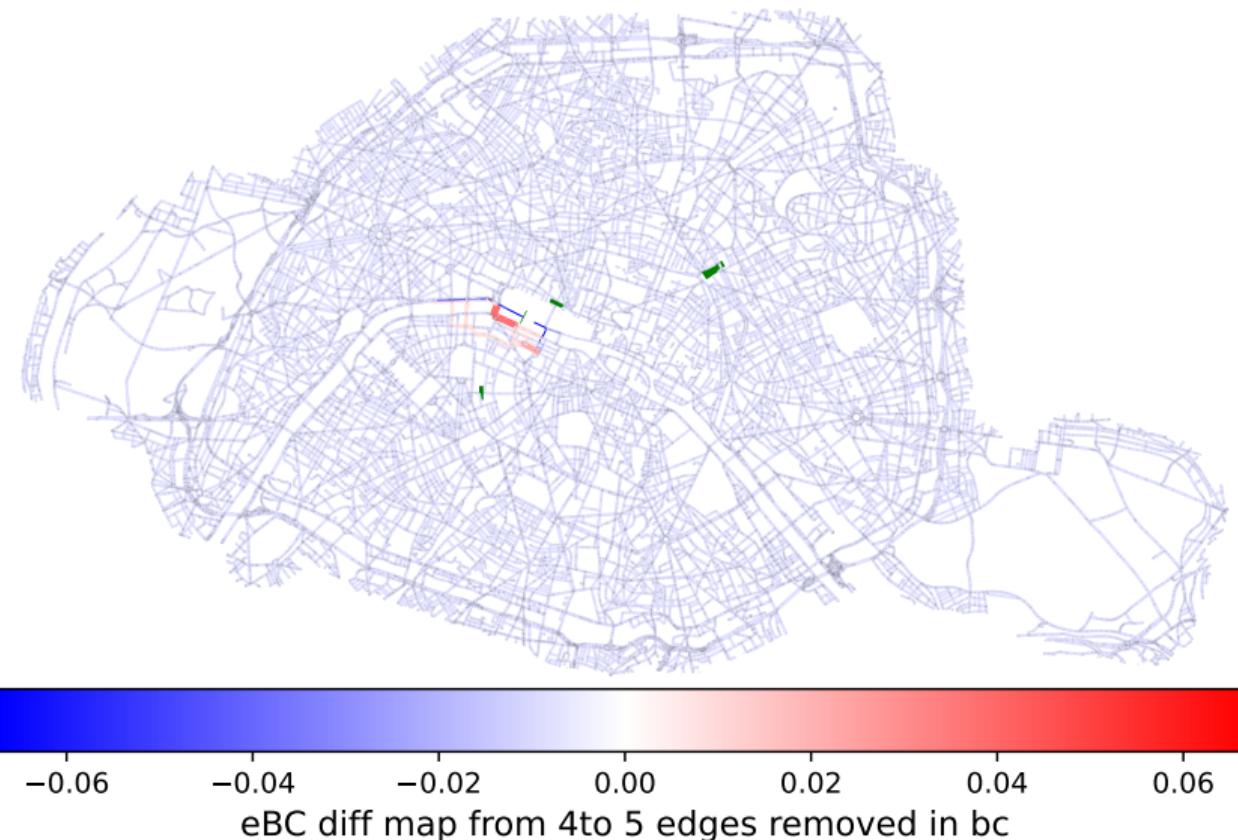
Touche des zones à forte eBC



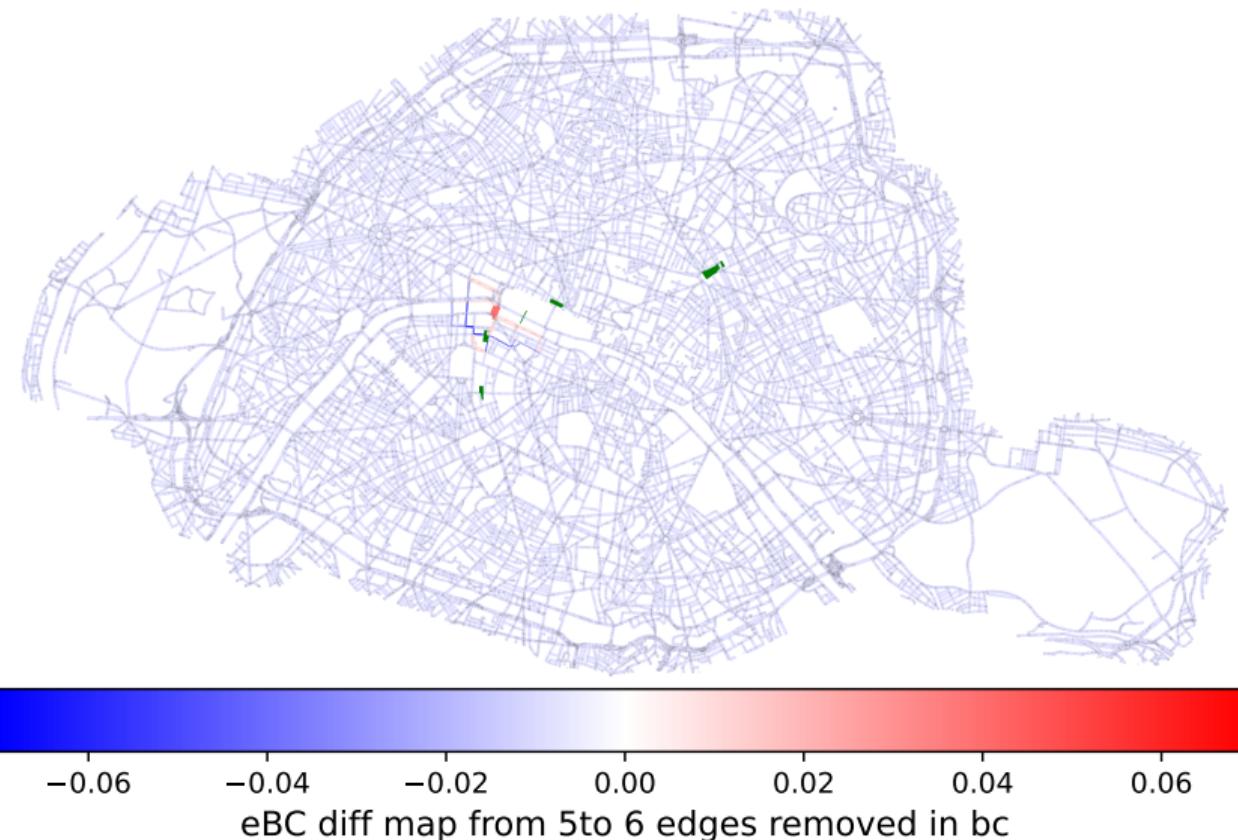
Stratégie d'engorgement d'un pont (1/4)



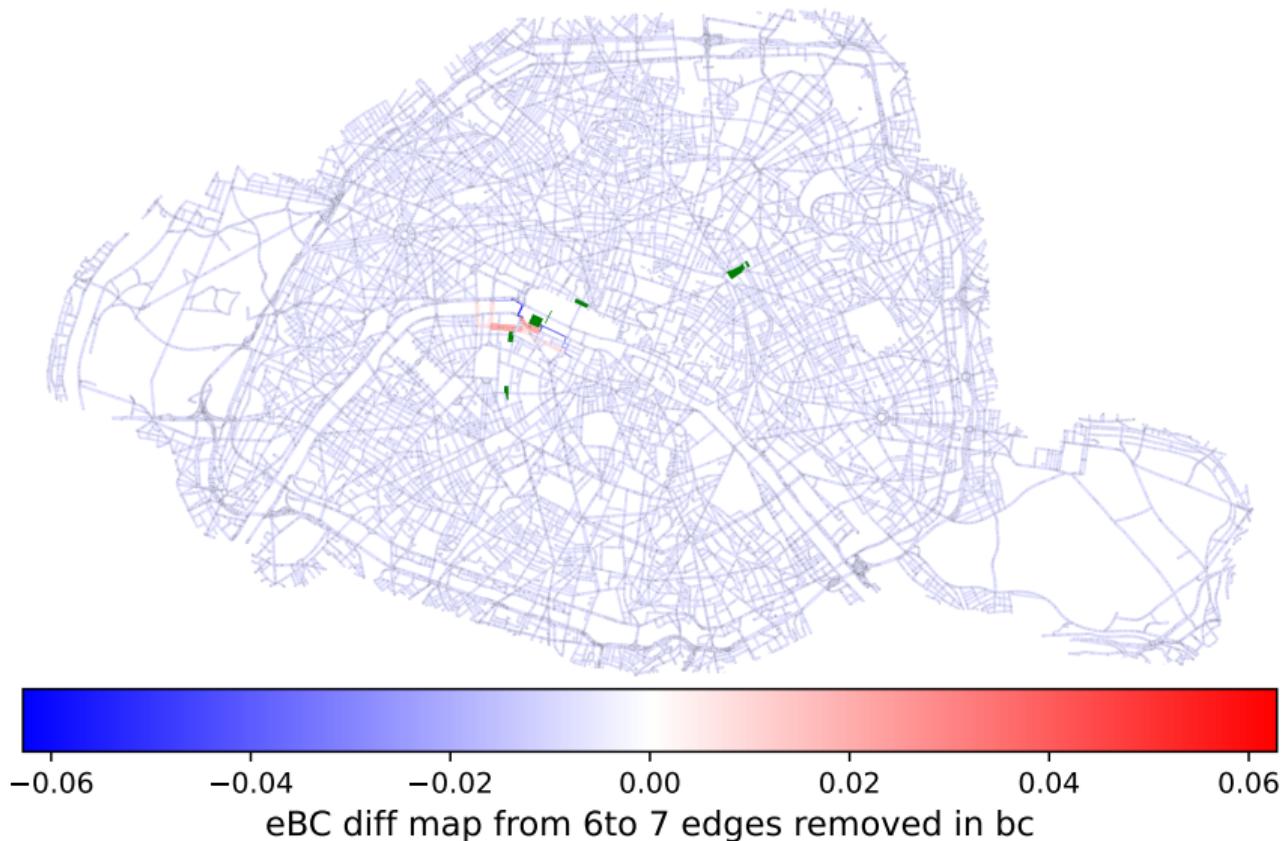
Stratégie d'engorgement d'un pont (2/4)



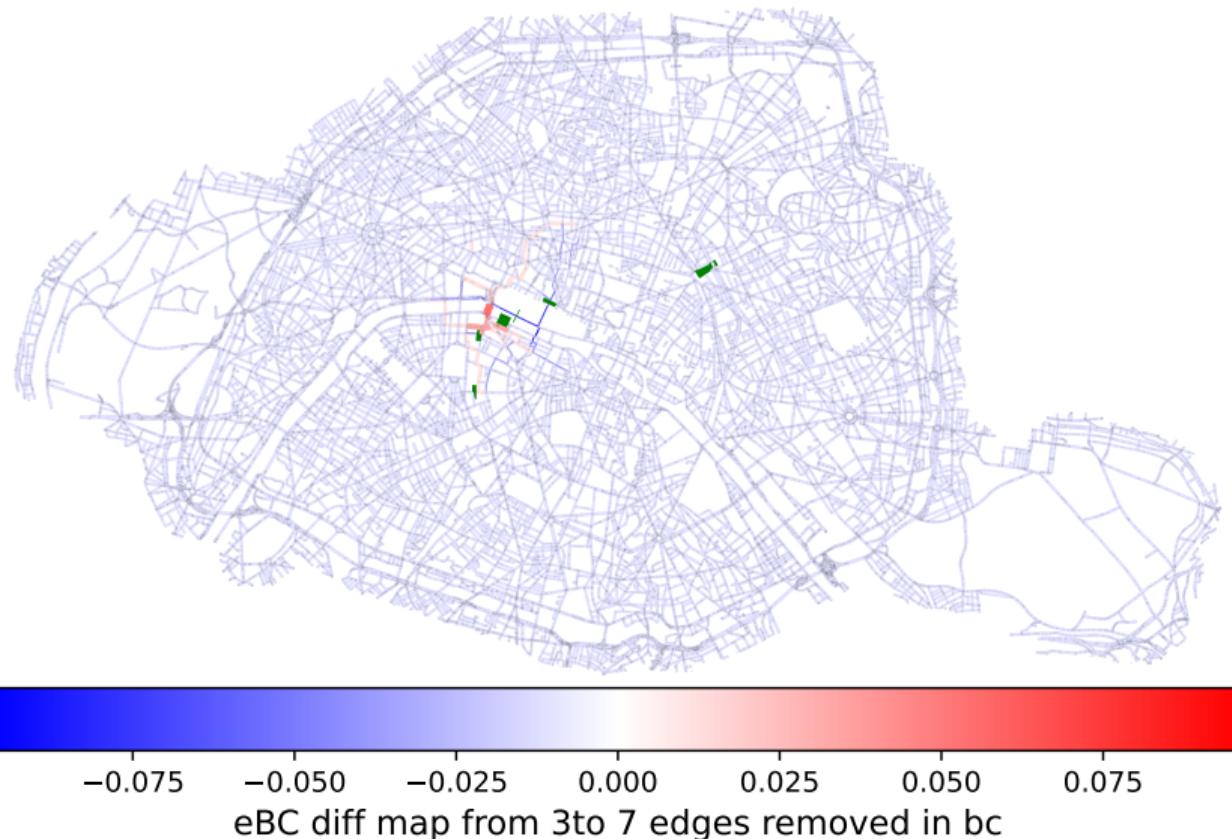
Stratégie d'engorgement d'un pont (3/4)



Stratégie d'engorgement d'un pont (4/4)

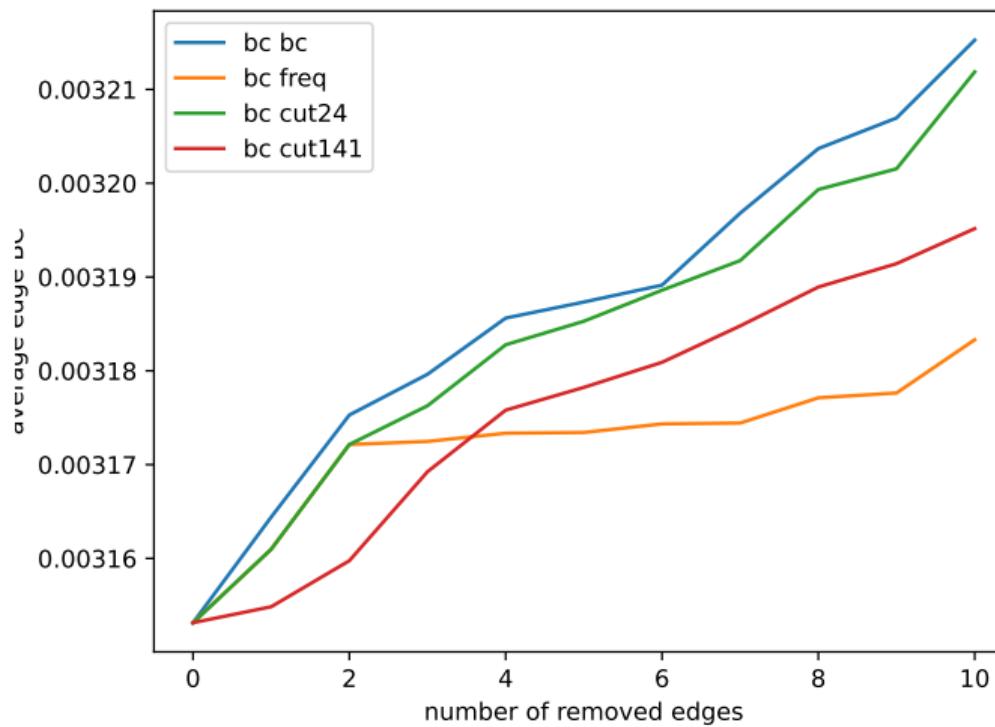


Stratégie d'engorgement d'un pont

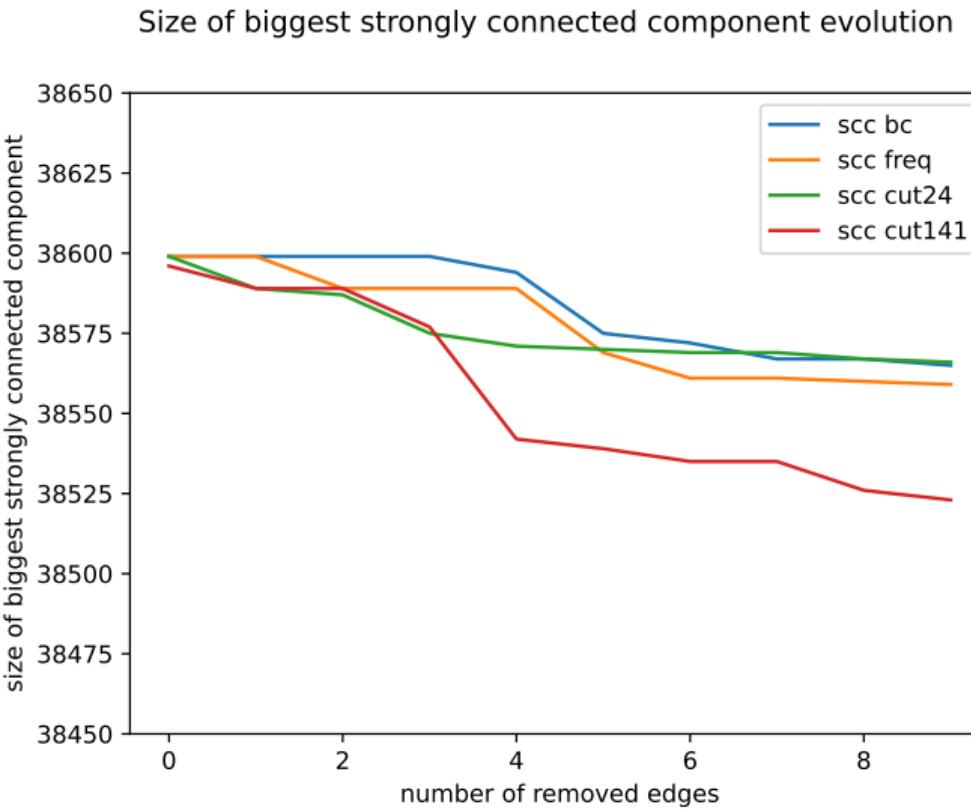


Score: moyenne edge Betweenness Centrality

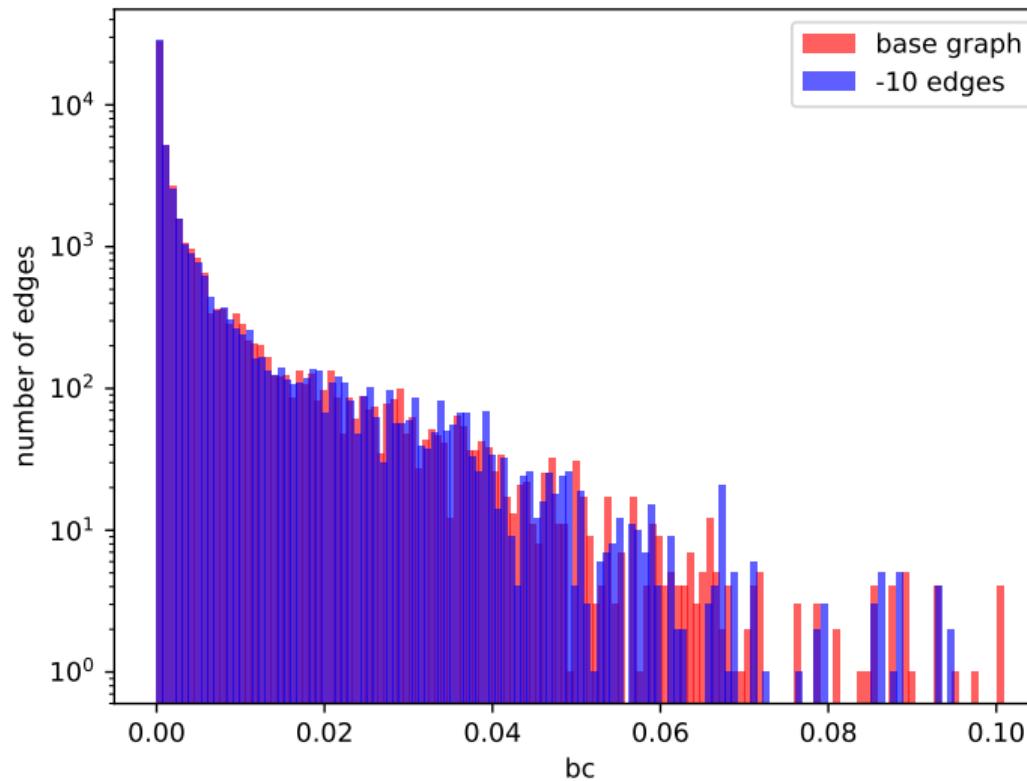
Average eBC evolution



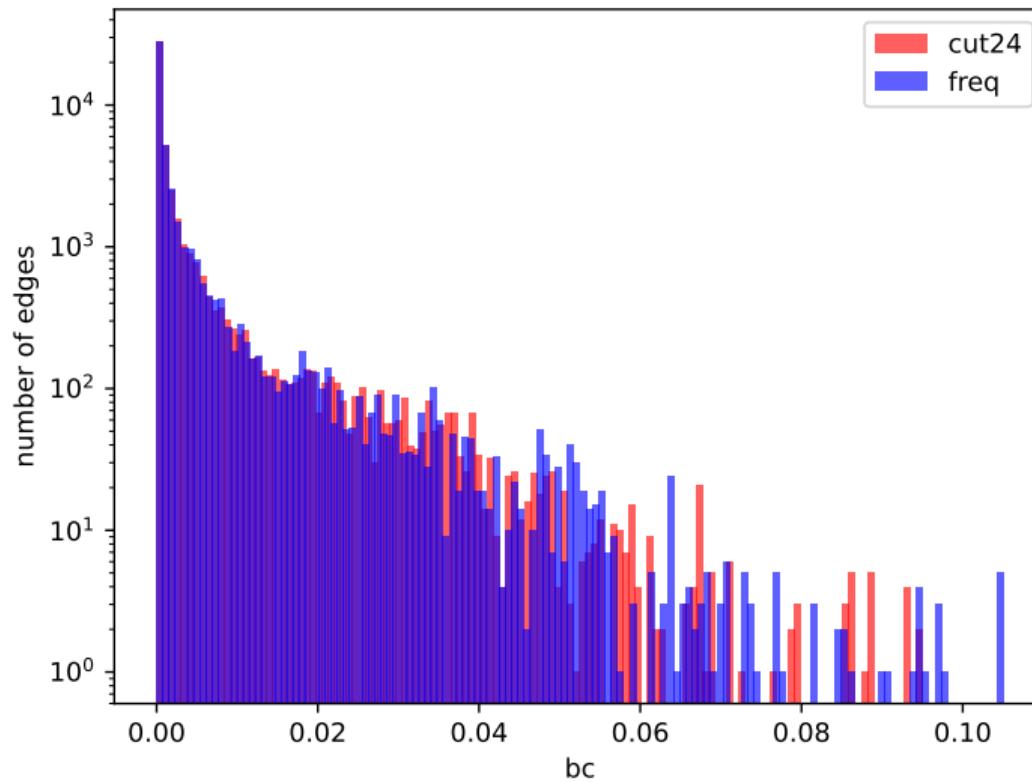
Score: plus grande composante fortement connexe



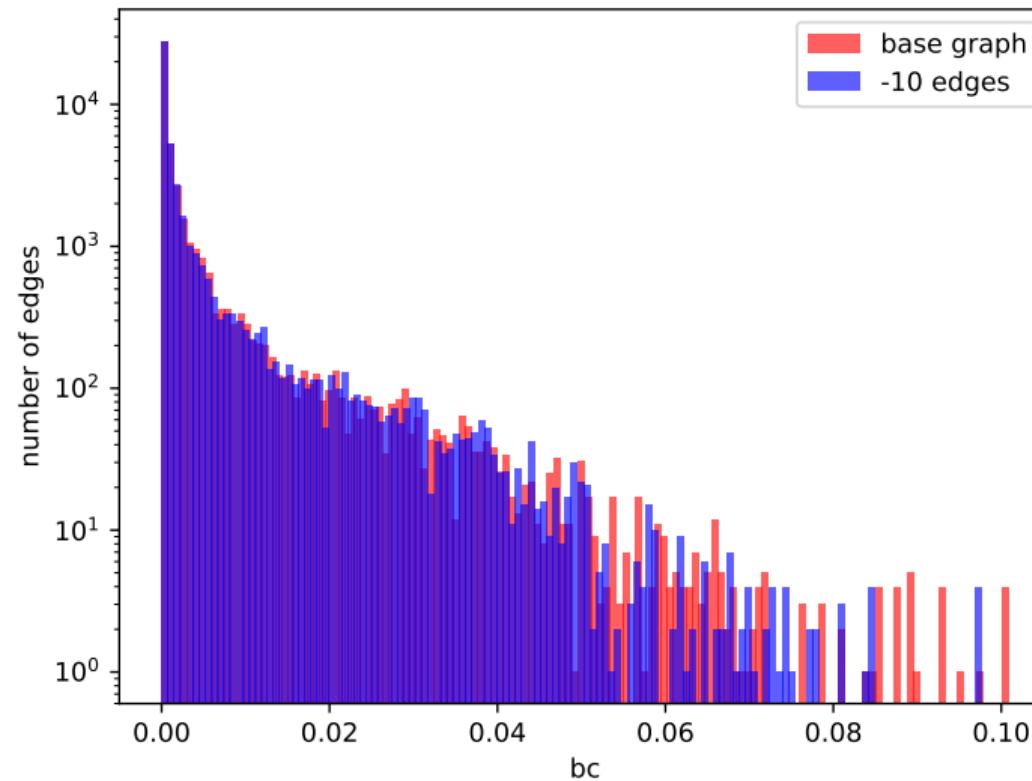
cut24: changements de distributions après 10 arêtes enlevées



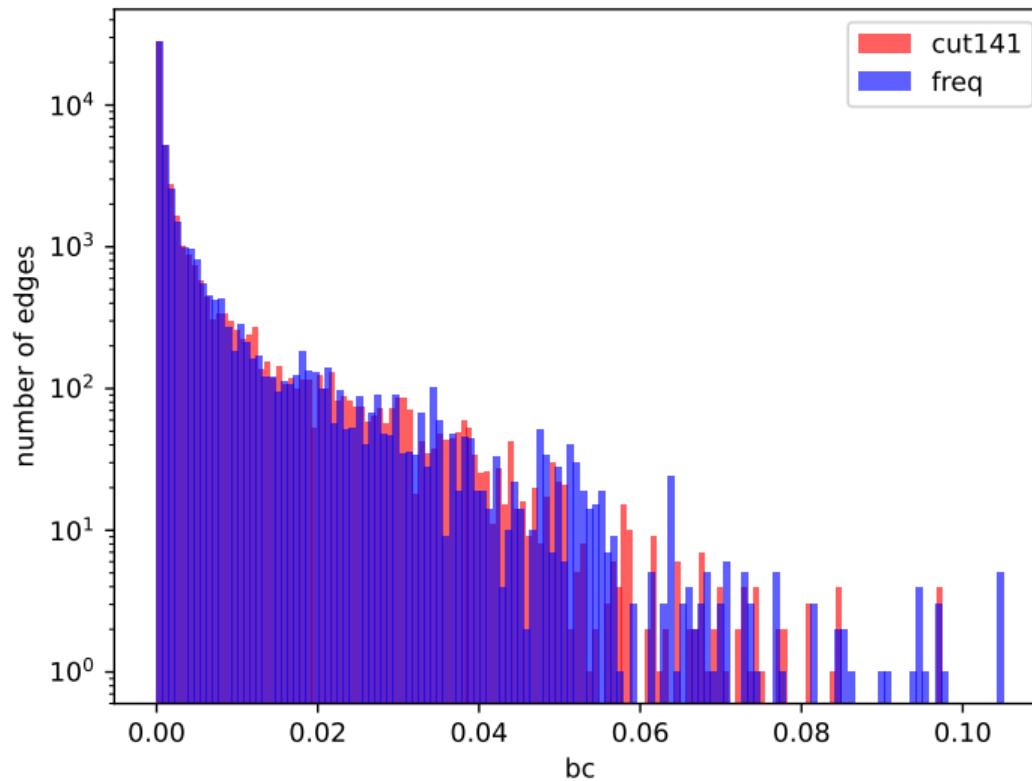
cut24 vs freq: distributions après 10 arêtes enlevées



cut141: changements de distributions après 10 arêtes enlevées

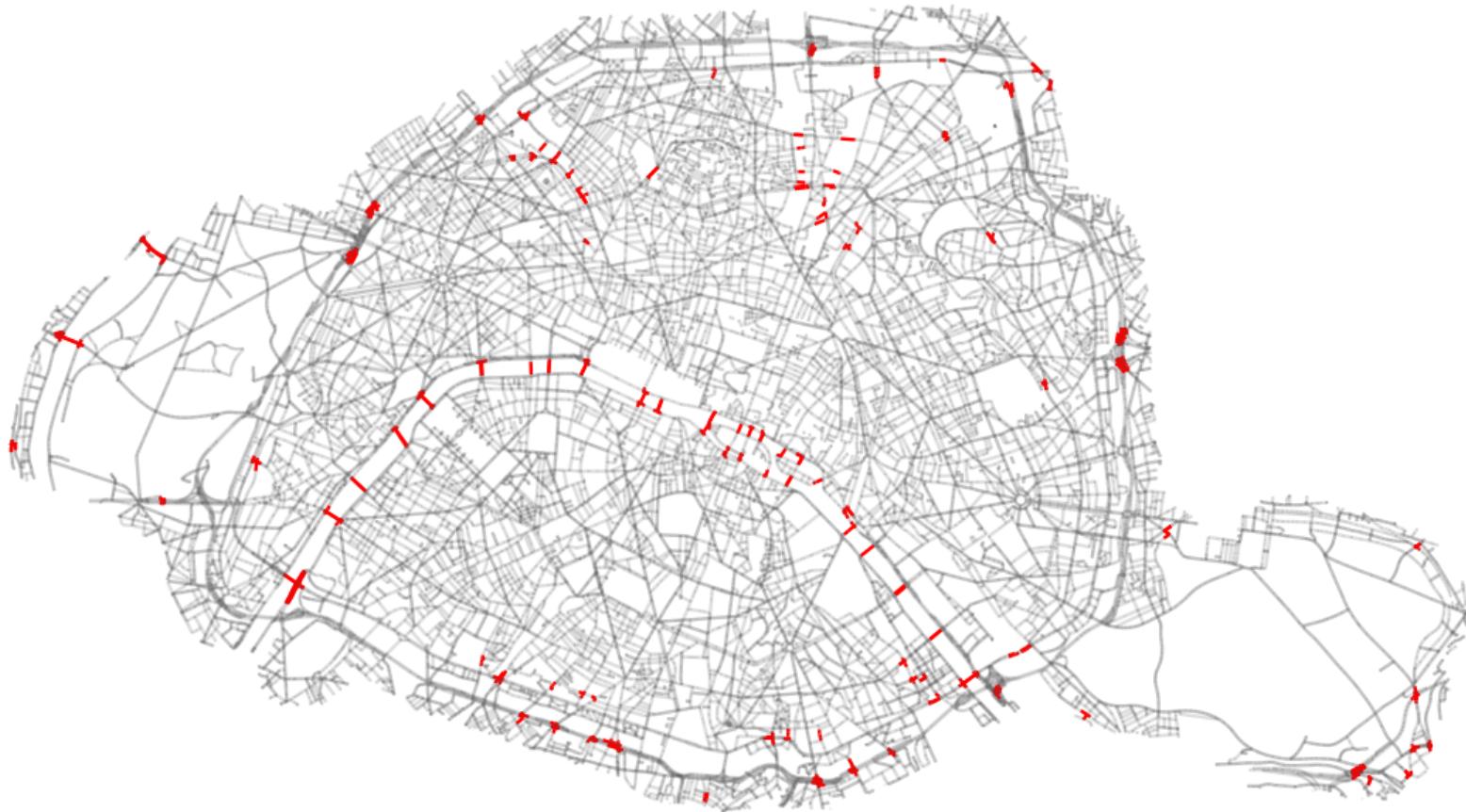


cut141 vs freq: distributions après 10 arêtes enlevées

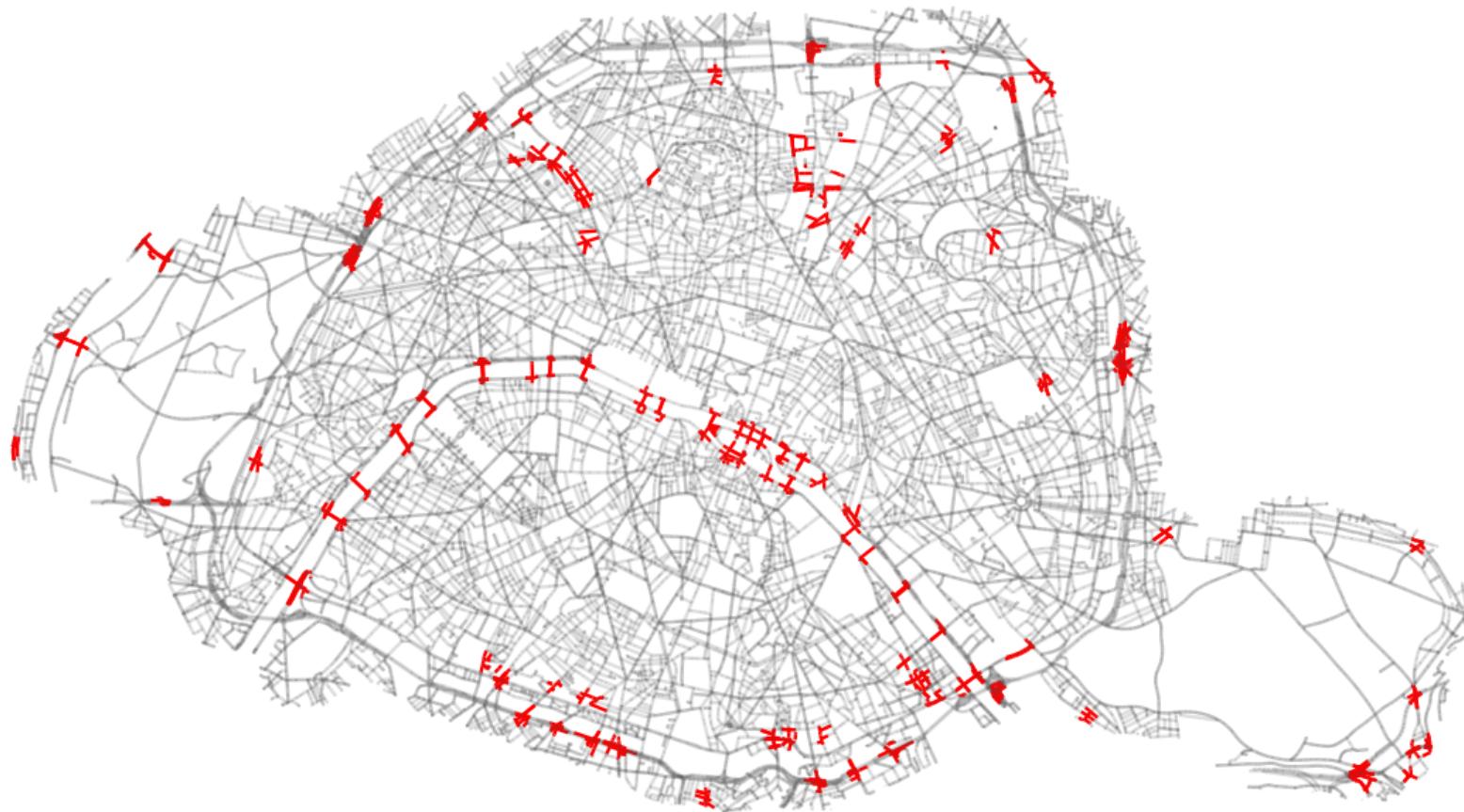


zones sans pont

Quelques essais de zones: 100m (1)



Quelques essais de zones: 200m (2)



Quelques essais de zones: 300m (3)

