

# The software GraphsInGraphs

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# What is a graph?

GIG

E. Camby

Context

My research area

GraphsInGraphs

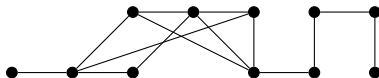
# What is a graph?

A **graph** is built from a set of vertices



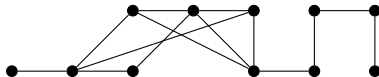
# What is a graph?

A **graph** is built from a set of vertices and a set of edges between some vertices.



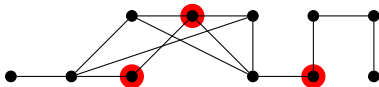
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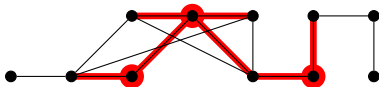
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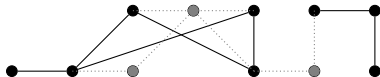
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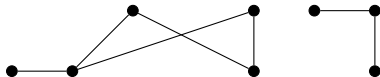
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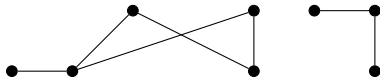
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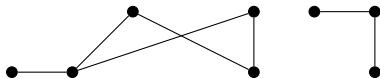
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Gilles and I developed a prototype of **GraphsInGraphs**.

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## What is GraphsInGraphs?

It's a computer system that helps research in Graph Theory, especially graphs with their induced subgraphs.

## How does GraphsInGraphs work ?

It computes, by induction, the list of all graphs (up to 10 vertices) and their relations of induced subgraphs.

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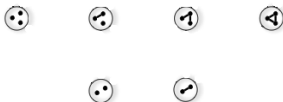
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- ▶ Suppose that the network  $N$  of graphs with  $k \geq 2$  vertices is built. We list all graphs on  $k + 1$  vertices. For each of these graphs, we list all induced subgraphs on  $k$  vertices by removing one vertex and we identify these subgraphs in the network  $N$ .

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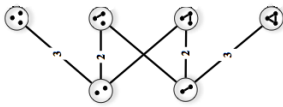


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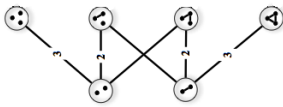
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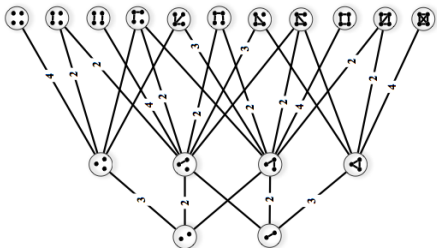
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## Question

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If **yes**, do not hesitate to send me an email at

`ecamby@ulb.ac.be`

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Thank you !  
Merci !