

# Simultaneous Drawing of Planar Graphs with Right-Angle Crossings and Few Bends

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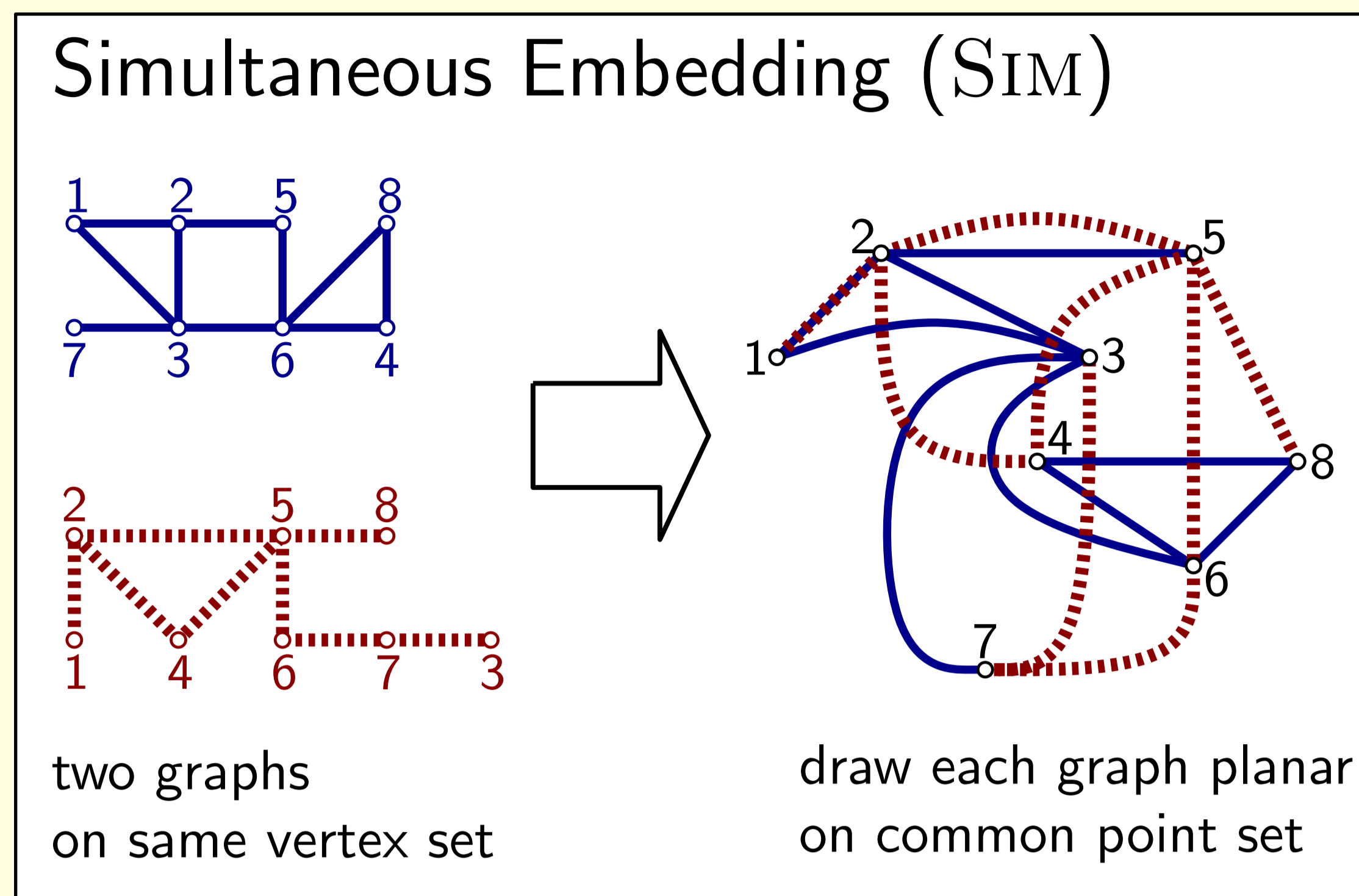
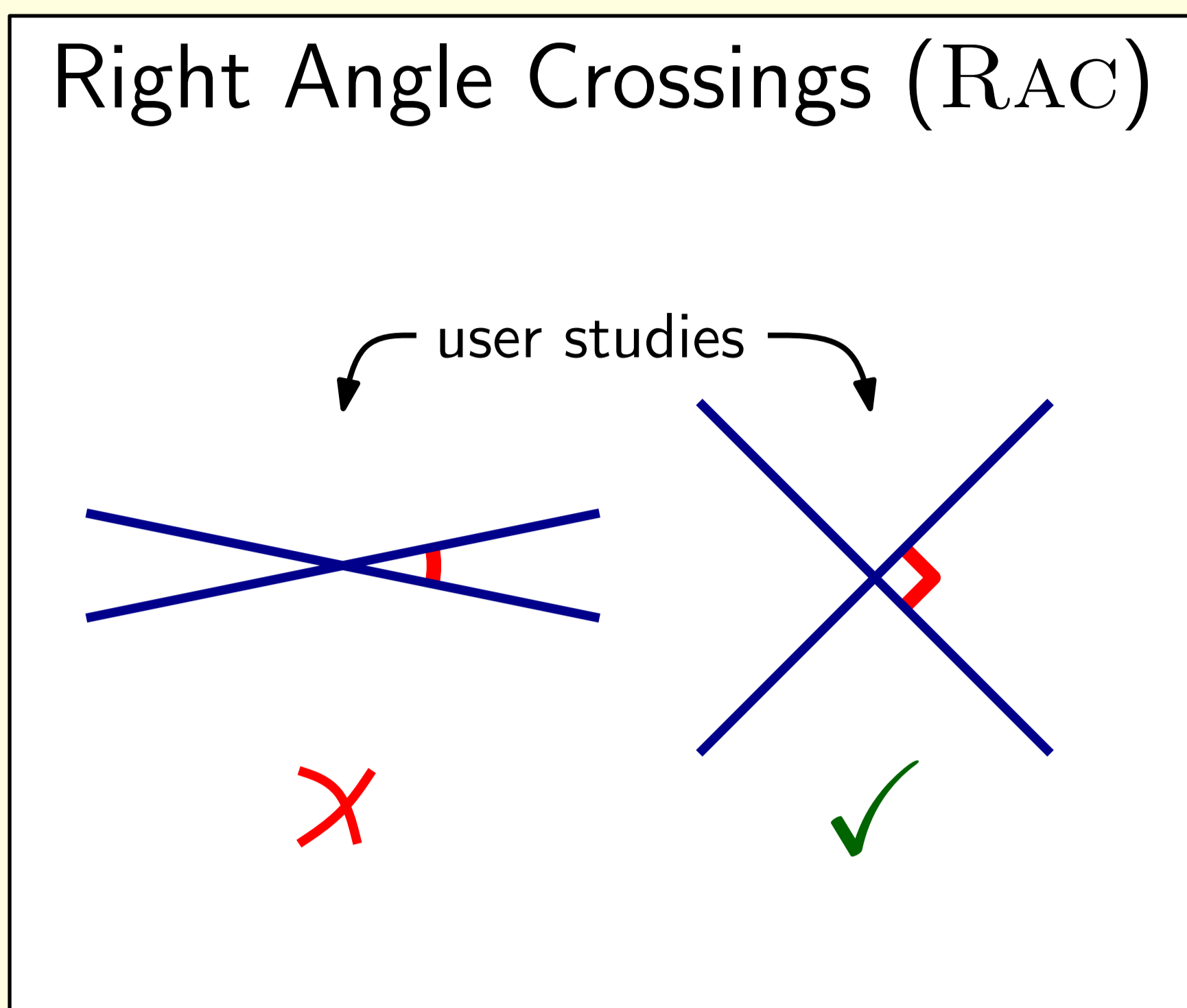
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Problem



= RACSIM

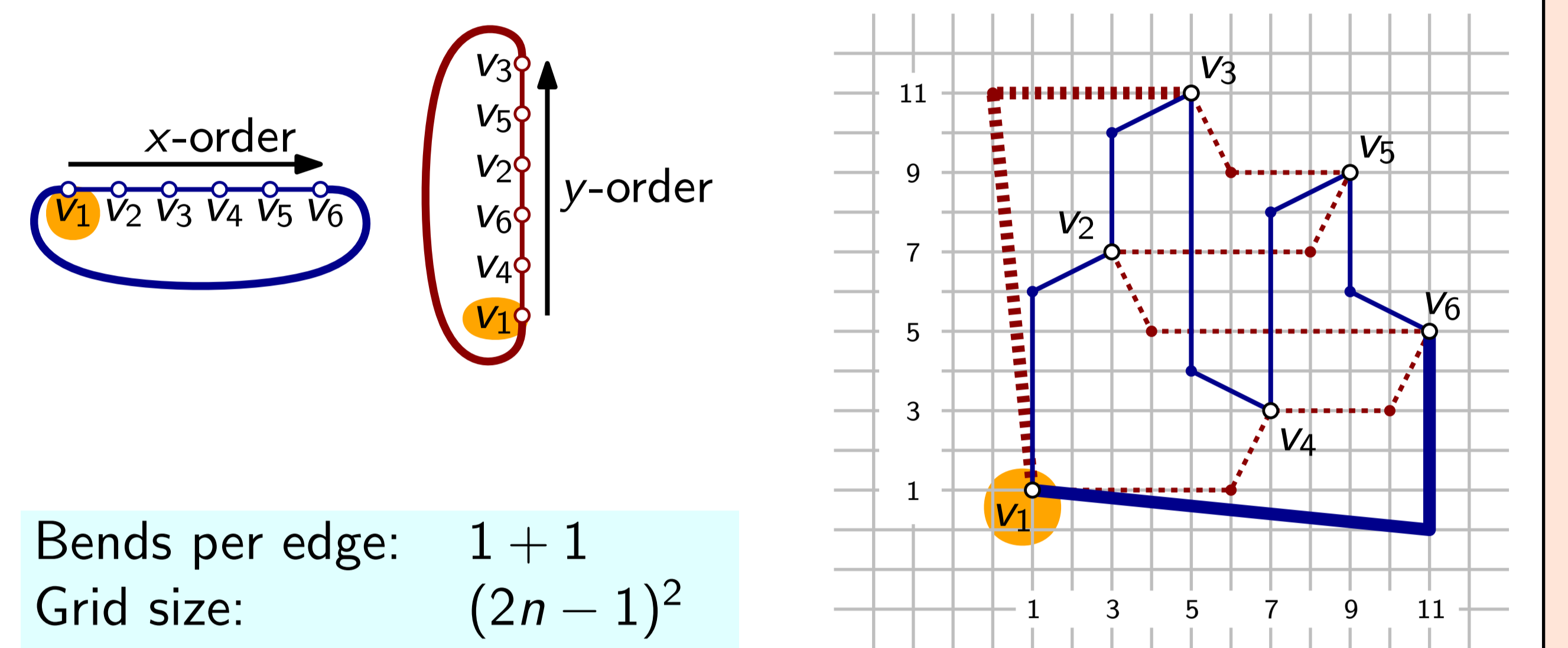


full version: [arxiv.org/abs/1408.3325](https://arxiv.org/abs/1408.3325)

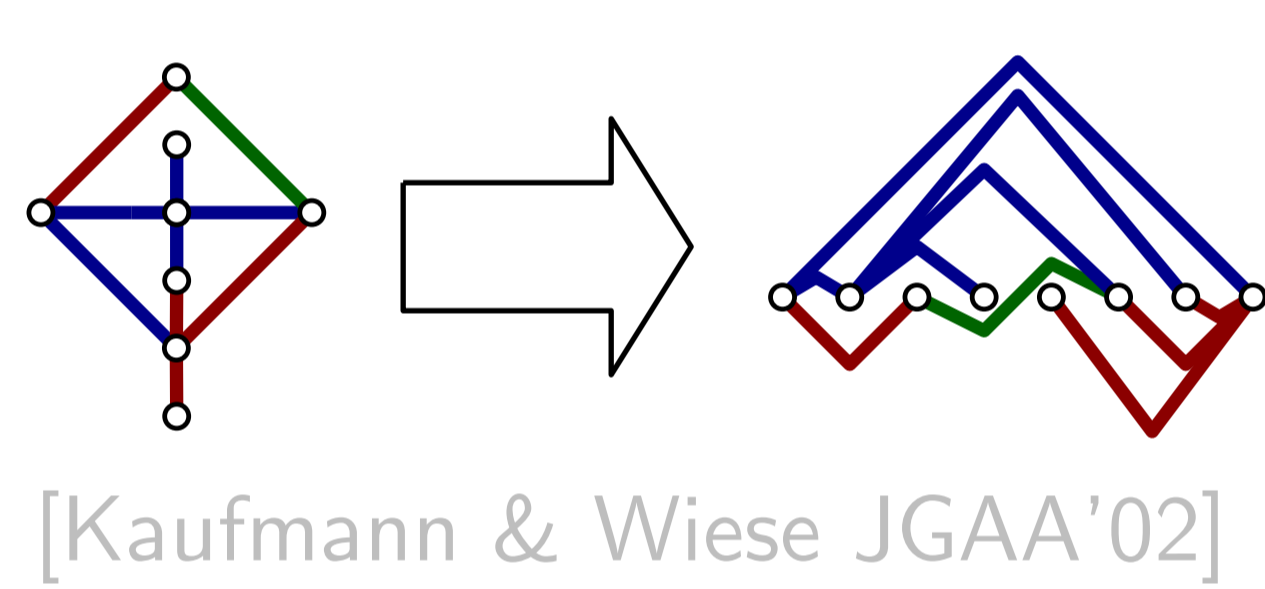
## Overview

Graph classes		Number of bends
Planar	+ Planar	6 + 6
2-page book emb.	+ 2-page book emb.	4 + 4
Outerplanar	+ Outerplanar	3 + 3
Cycle	+ Cycle	1 + 1
Caterpillar	+ Cycle	1 + 1
Four Matchings		1 + 1 + 1 + 1
Tree	+ Matching	1 + 0
Wheel	+ Matching	2 + 0
Outerpath	+ Matching	2 + 1

## Cycle + Cycle



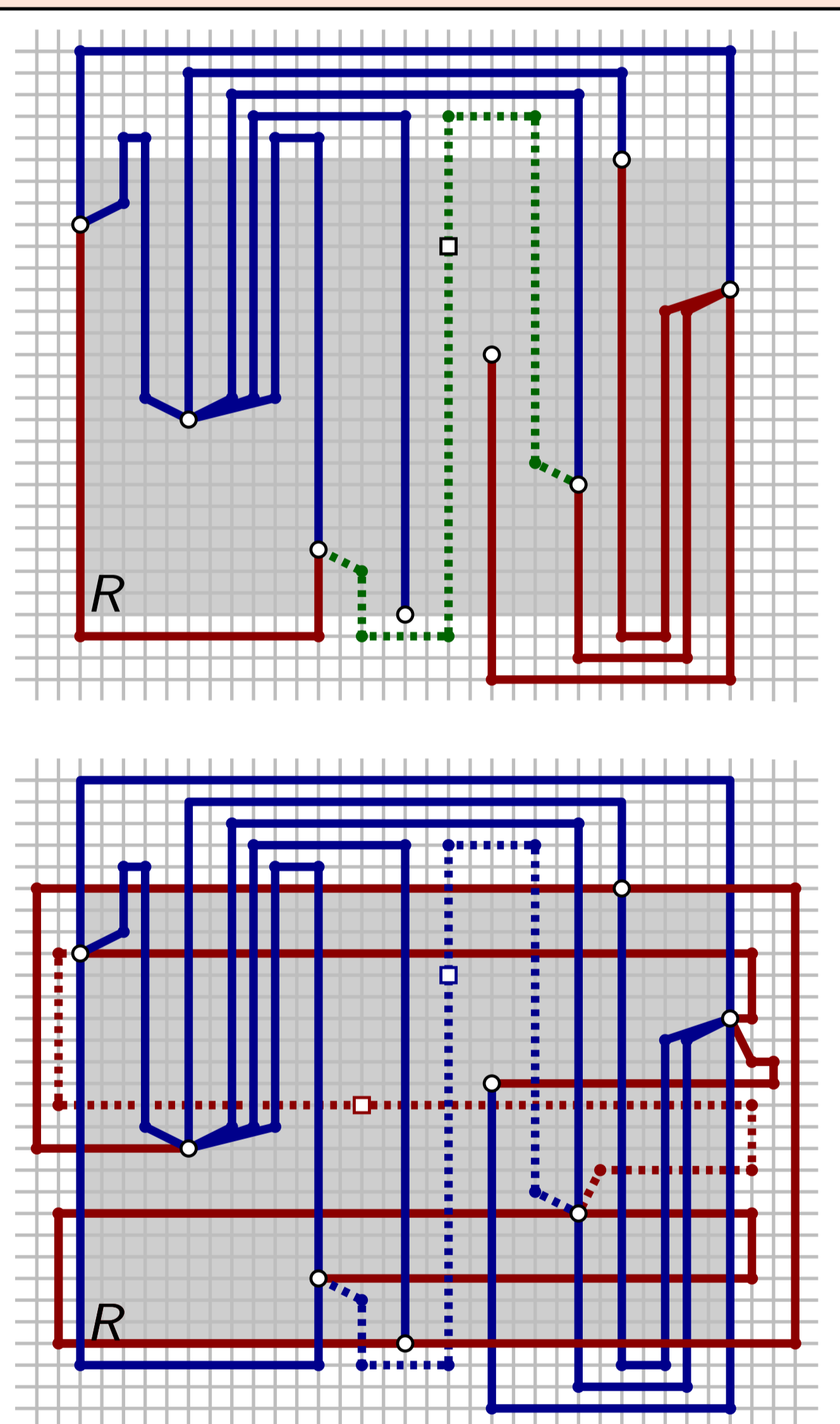
## Planar + Planar



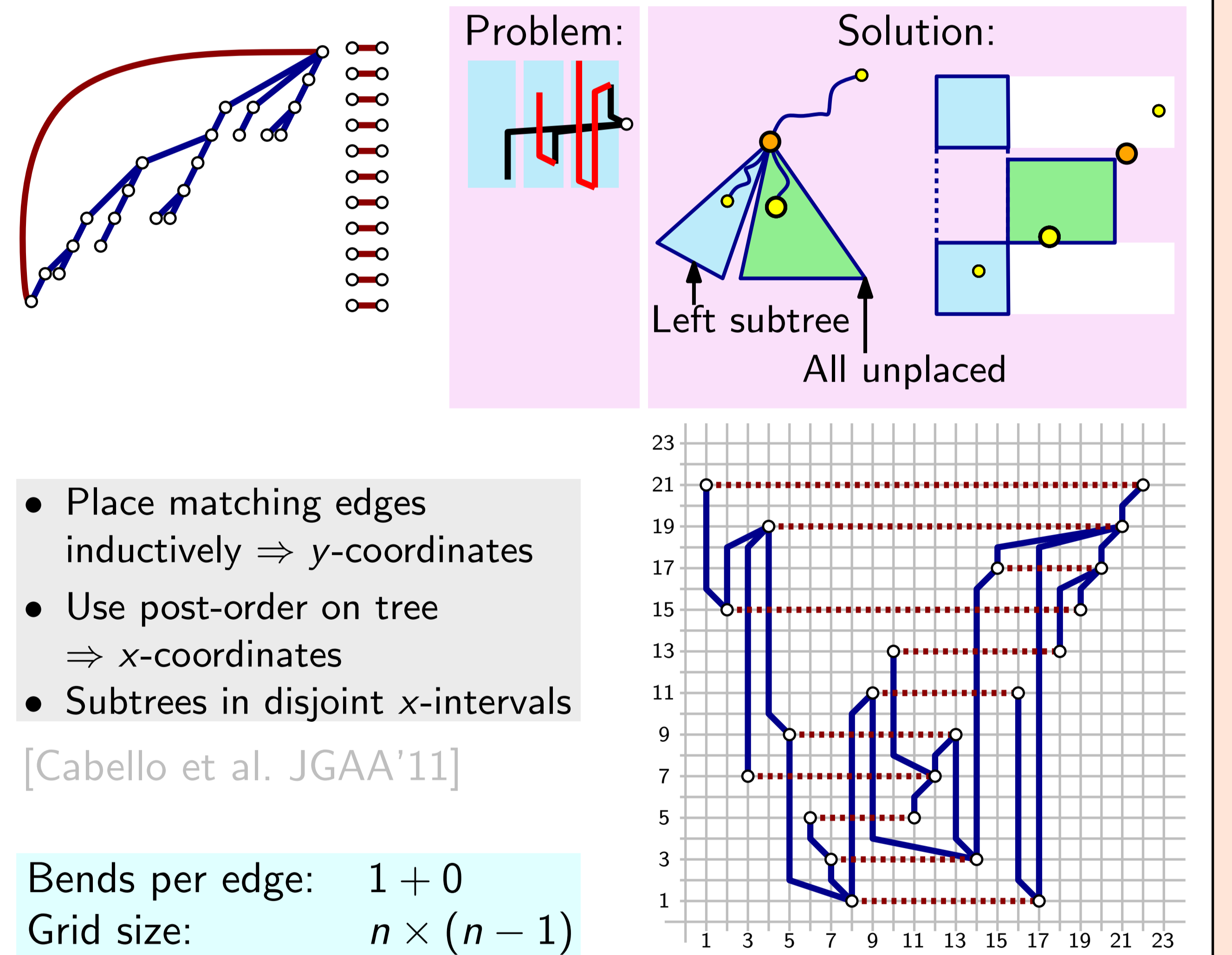
Graph 1: x-coordinates  
Graph 2: y-coordinates  
In  $R$ : all segments vertical or of y-length 1

Edges: 4 4 6

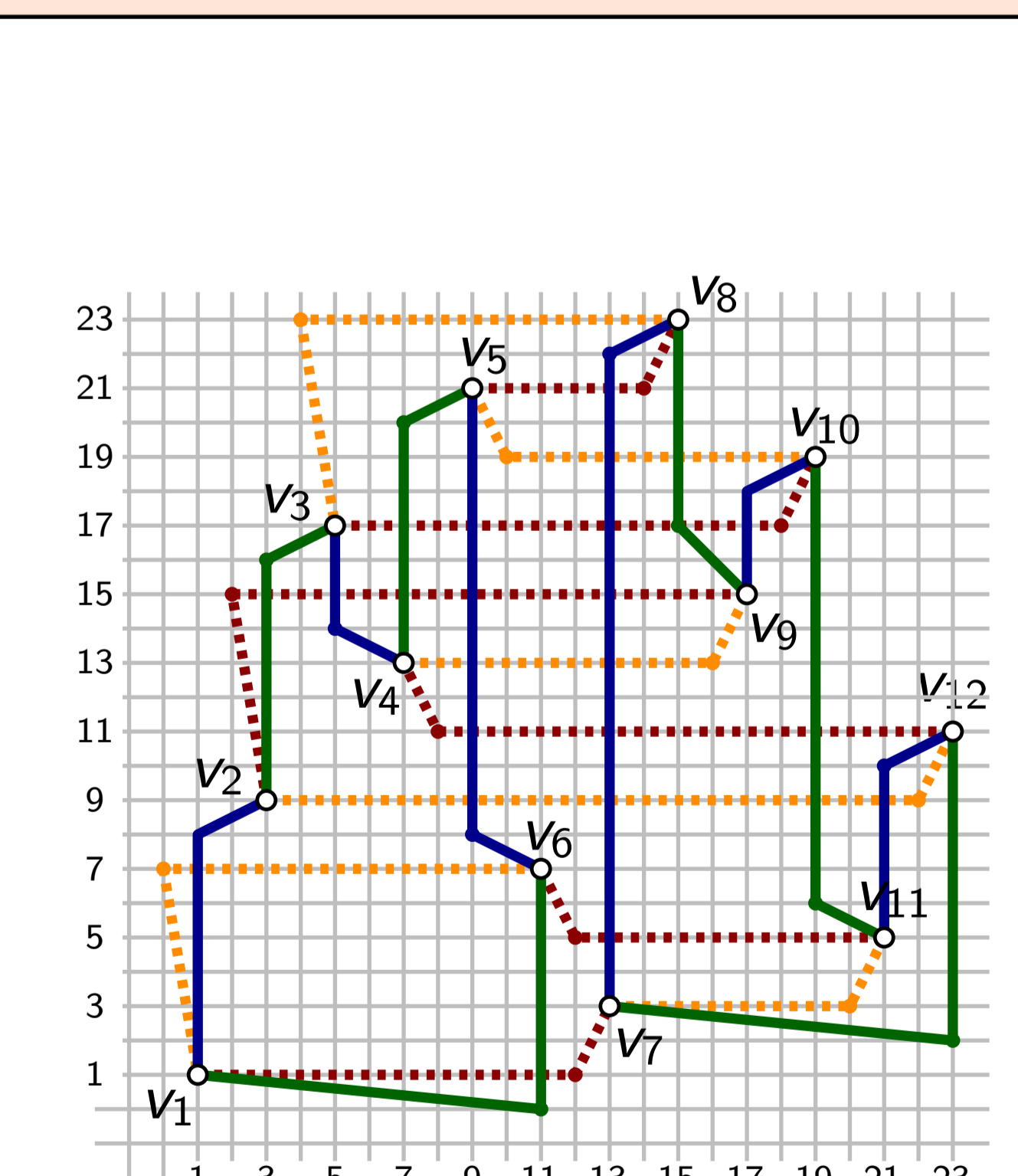
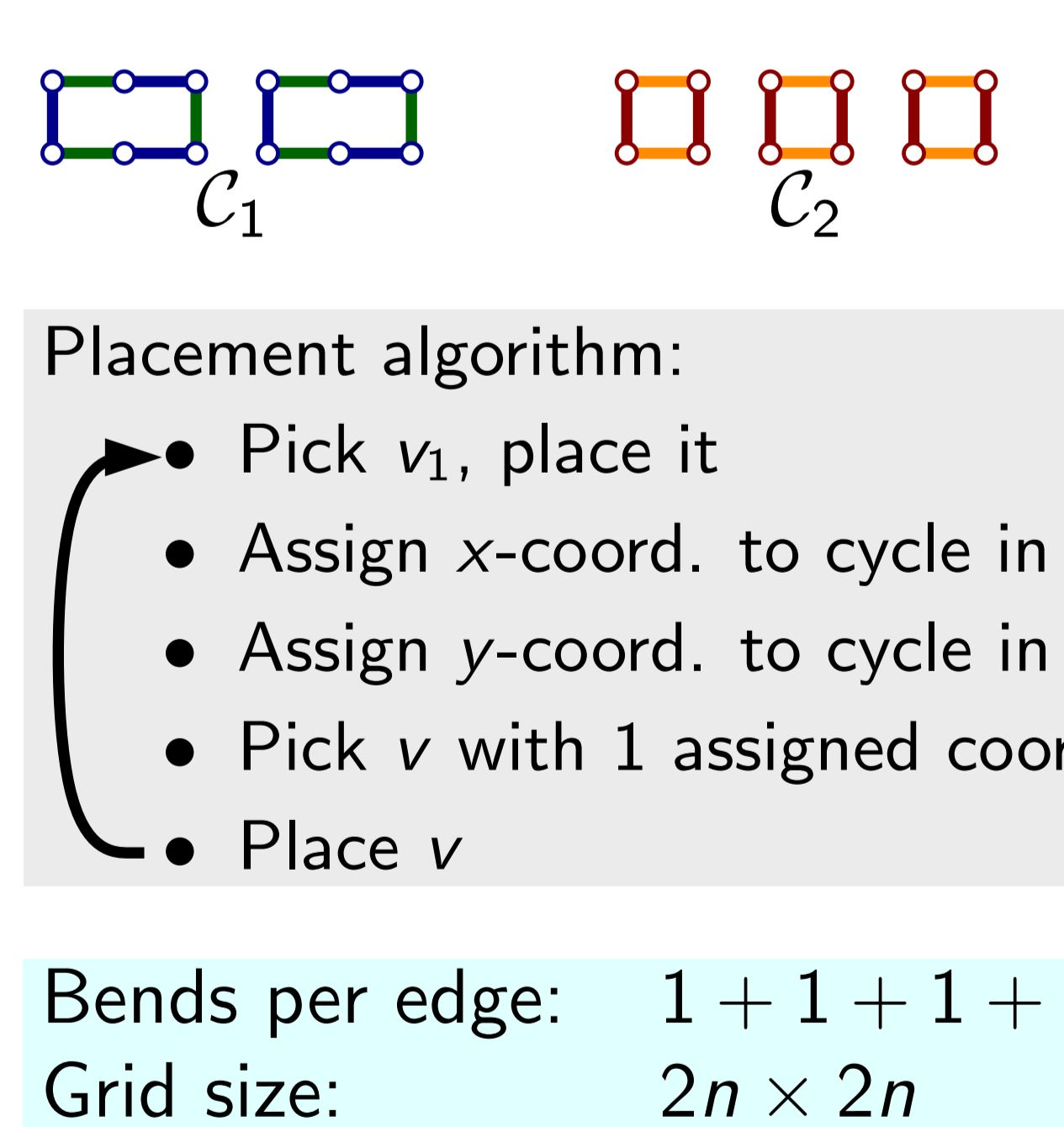
Bends per edge: 6 + 6  
Grid size:  $(14n - 26)^2$



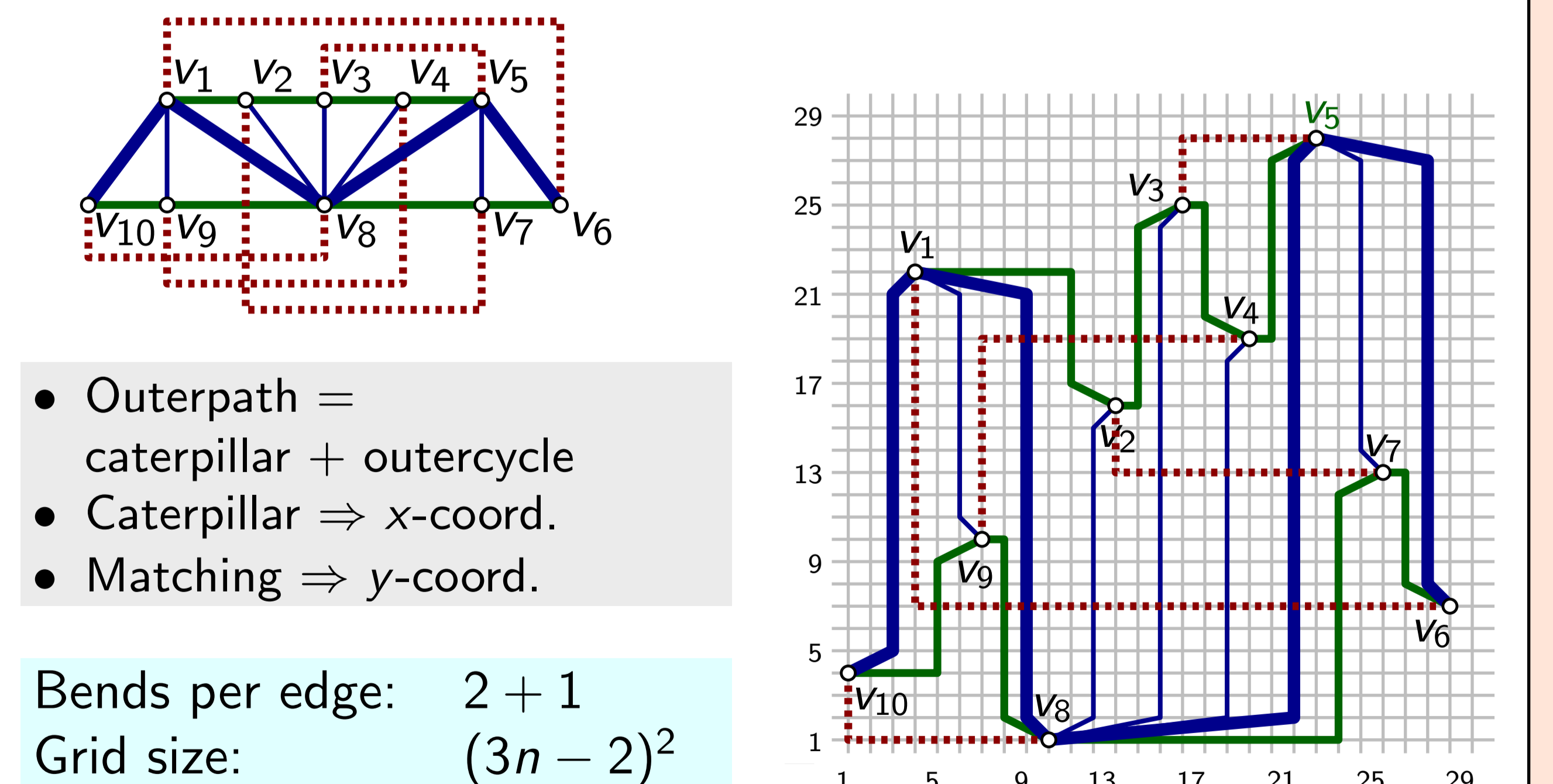
## Tree + Matching



## Four Matchings



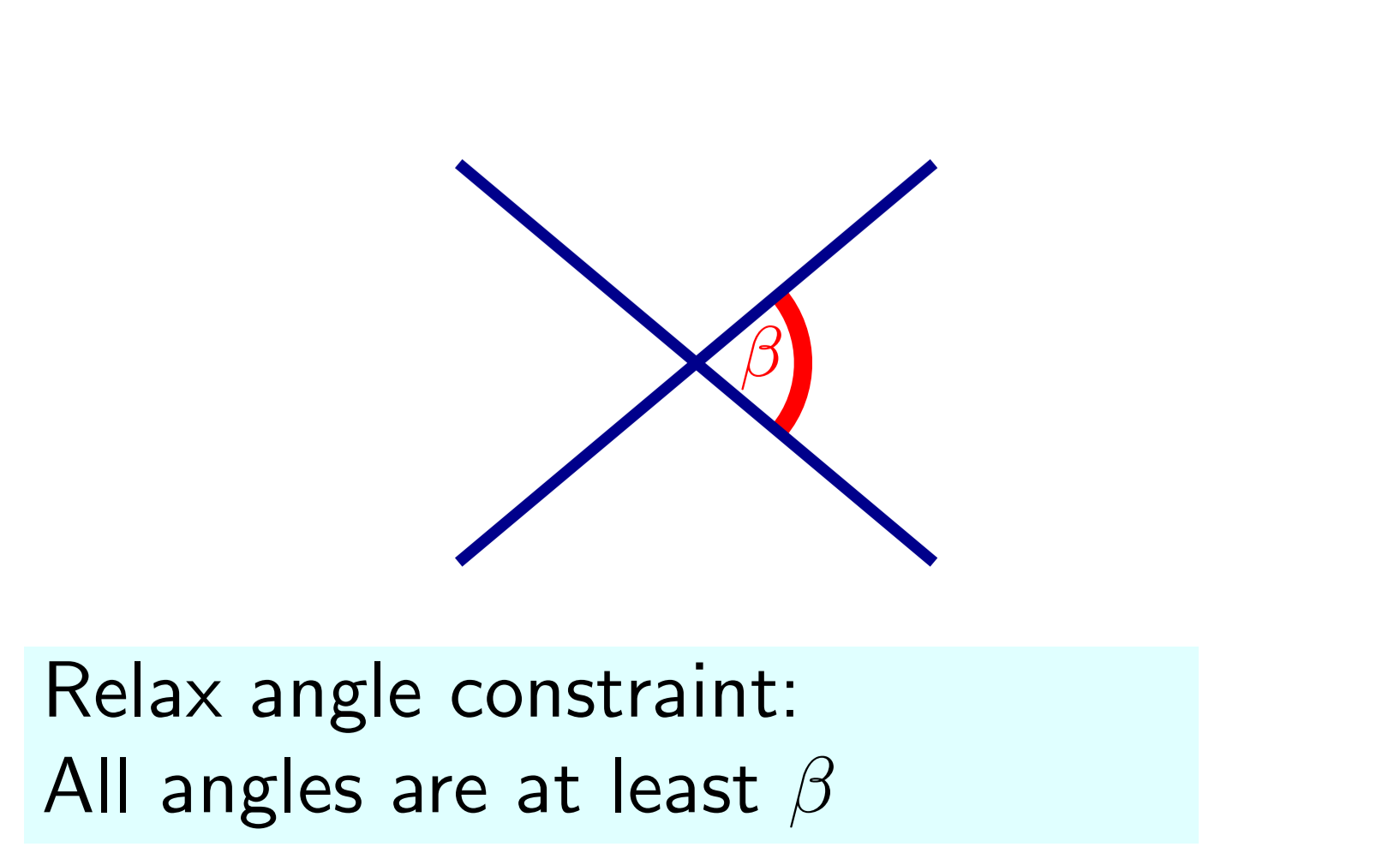
## Outerpath + Matching



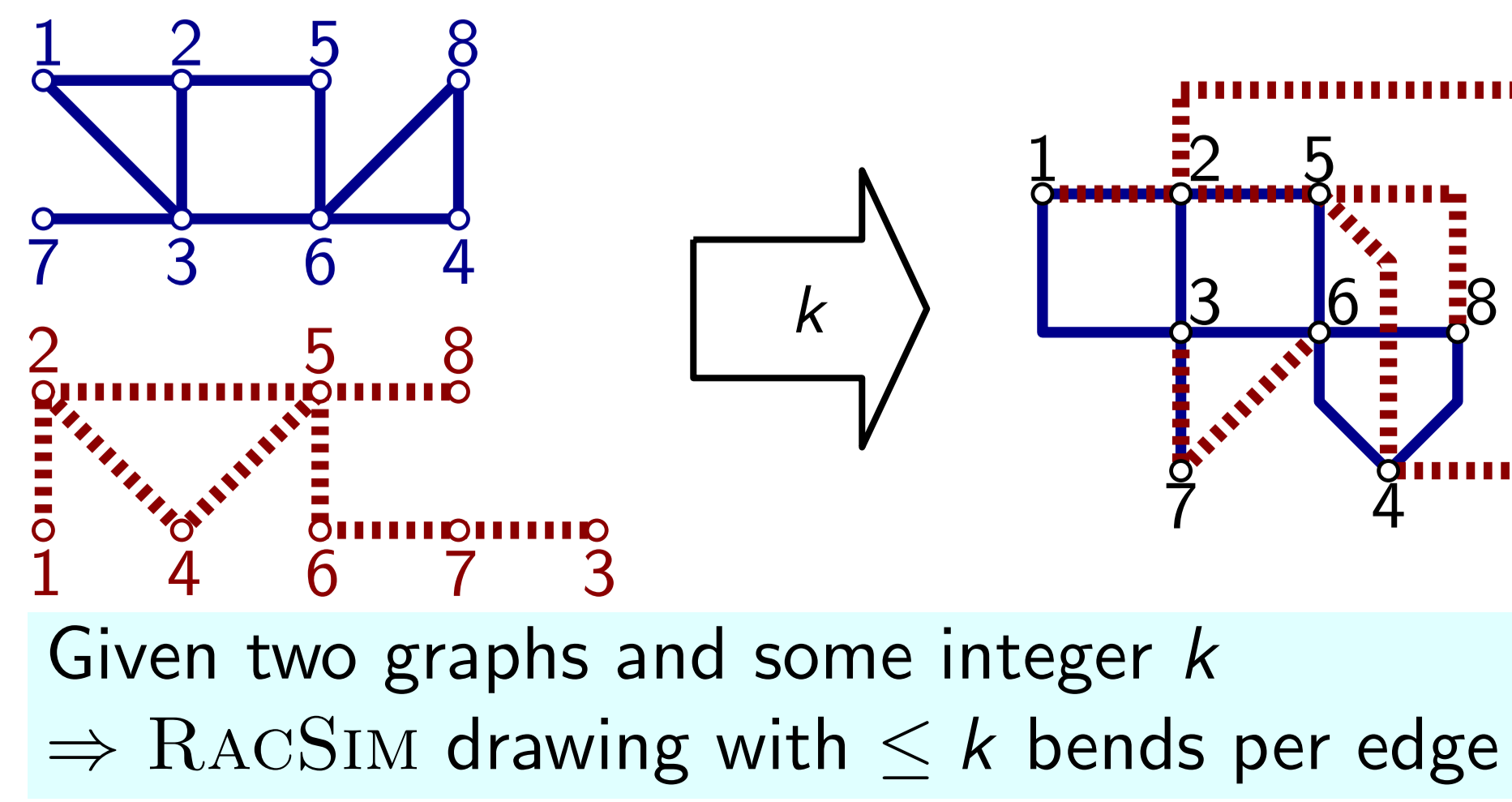
Results

Future Work

## Large Angle Crossings (LAC)



## Computational Complexity



## SIMRAC drawings

