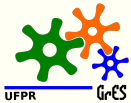

Title

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Augusto Lopez Dantas (aldantas at protonmail dot com)

Conference, Month startDay–endDay, Year, City, Country

March 11, 2020

Introduction

Why Beamer?

1. LaTeX is great!
2. Beamer is easy to use!
3. Why not?

Why Custom Themes?

- The default Beamer themes are outdated and visually displeasing
- There aren't many Beamer themes readily available online
- Making custom Beamer themes is easy!

Lorem Ipsum

Lorem 1

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

Lorem 2

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Lorem 3

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- text text text text
- text text text text
- text text text text
- text text text text

text text text text

text text text text[2] text text text text text text text text text text text text text text text text text[3]

[1] Rainer E Burkard et al. "The Quadratic Assignment Problem". In: *Handbook of Combinatorial Optimization*. Springer, 1998.

[2] Sartaj Sahni and Teofilo Gonzalez. "P-complete approximation problems". In: *Journal of the ACM (JACM)* 23.3 (1976).

[3] Nathan W Brixius and Kurt M Anstreicher. "The Steinberg Wiring Problem". In: *SIAM* (2001).

Lorem 4

1. text text text text
2. text text text text
   text text text text
3. text text text text
4. text text text text

Lorem 5

text text text text

$$p_{ij}^{k} = \begin{cases} \dfrac{[\tau_{ij}]^{\alpha}[\eta_{ij}]^{\beta}}{\sum_{l \in \text{free}_k} [\tau_{il}]^{\alpha}[\eta_{il}]^{\beta}} & \text{if } j \in \text{free}_k \\ 0 & \text{otherwise} \end{cases}$$

- α and β text text text text
- free_k text text text text k

text text text text

text text text text

$$D = \begin{bmatrix} 0 & 5 & 2 & 4 \\ 5 & 0 & 1 & 3 \\ 2 & 1 & 0 & 1 \\ 4 & 3 & 1 & 0 \end{bmatrix} \Rightarrow P_d = \begin{bmatrix} 11 \\ 9 \\ 4 \\ 8 \end{bmatrix} \qquad F = \begin{bmatrix} 0 & 50 & 60 & 94 \\ 50 & 0 & 22 & 50 \\ 60 & 22 & 0 & 44 \\ 94 & 50 & 44 & 0 \end{bmatrix} \Rightarrow P_f = \begin{bmatrix} 204 \\ 122 \\ 126 \\ 188 \end{bmatrix}$$

Lorem 6

$$H = P_d * P_f' = \begin{bmatrix} 2244 & 1342 & 1386 & 2068 \\ 1836 & 1098 & 1134 & 1692 \\ 816 & 488 & 504 & 752 \\ 1632 & 976 & 1008 & 1504 \end{bmatrix}$$

$$\eta_{ij} = 1/H_{ji}$$

Hybrid Max-Min Ant System

Algorithm

```
m ← number of ants
global-best ← ∞
pheromone-matrix ← InitializePheromoneMatrix()
repeat
    iteration-best ← ∞
    for k ← 0 to m do
        ant ← ConstructSolution()
        ant ← LocalSearch(ant)
        if Cost(ant) < Cost(iteration-best) then
            iteration-best ← ant
        end
    end
    if Cost(iteration-best) < Cost(global-best) then
        global-best ← iteration-best
        UpdateMaxMinValues()
    end
    best-ant ← SelectBest(global-best, iteration-best)
    UpdatePheromoneMatrix(best-ant)
until stopping criteria is not met
return global-best
```

Conclusions

Closing Thoughts

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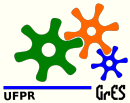
- text text text text text text text text text text text text text
- text text text text text text text text text text text text text
- Future Works:
  - text text text text text text text text
  - text text text text text text text text



Title

Thank you!

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