

How to give a 20-minute conference talk

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2. I don't know the definition of "a good conference talk".
3. Most of you don't work in [algorithmic graph theory](#).

Idea behind [this](#) talk:

- ▷ Tell you about my own experiences.
- ▷ List some general do's and don'ts.

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The rest of this talk consists of two parts:

1. What to do **before** the conference?
2. What to do **during** the conference?

Part ①: What to do before the conference?

First of all: congratulations!!

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A 20-minute conference talk is the perfect opportunity to:

- ▷ advertise your paper
- ▷ advertise your research area
- ▷ advertise yourself

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Strategy 1:

- ▶ take your 12-page paper
- ▶ compress it into a 20-minute presentation

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Strategy 2:

- ▶ prepare a 5-minute “coffee machine pitch”
- ▶ extend it into a 20-minute presentation

YOUR CONFERENCE PRESENTATION



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When **making slides**, keep in mind that:

- ▷ making good slides takes time
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Algorithmica

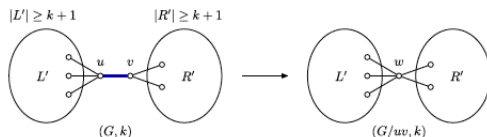


Fig. 2 An illustration of Rule 1: bridge uv is contracted, since deleting uv from G results in two connected components that contain at least $k + 2$ vertices each. Vertex w in the graph G/uv is the vertex resulting from the contraction of the edge uv in G

In the remainder of this section, we first show that PATH CONTRACTION has a linear vertex kernel. We then present a deterministic algorithm with running time $2^{k+o(k)} + n^{O(1)}$ for this problem. Consider the following reduction rule (see also Fig. 2 for an illustration).

Rule 1 Let (G, k) be an instance of PATH CONTRACTION. If G contains a bridge uv such that the deletion of edge uv from G results in two connected components that contain at least $k + 2$ vertices each, then transform the instance into (G', k) , where G' is the graph resulting from the contraction of edge uv .

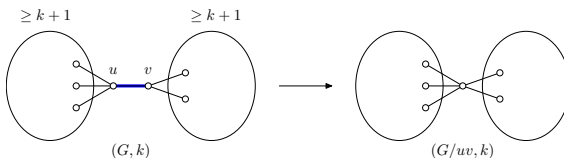
The following lemma shows that the above reduction rule is “safe”, i.e., that it returns an equivalent instance of the problem. We then prove that this single reduction

Contracting a graph to a path

Reduction rule

Let (G, k) be an instance of PATH CONTRACTION. If G contains a bridge uv such that the graph $G - \{u, v\}$ has two connected components that contain at least $k + 1$ vertices each, then transform the instance (G, k) into the instance $(G/uv, k)$, where G/uv is the graph resulting from the contraction of edge uv .

Contracting a graph to a path

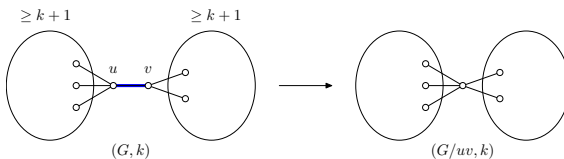


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On the parameterized complexity of finding separators with non-hereditary properties

Pim van 't Hof

University of Bergen

joint work with

Pinar Heggernes

Dániel Marx

Neeldhara Misra

Yngve Villanger

WG 2012

Jerusalem, Israel

26–28 June 2012

Introduction
2-CONNECTED SEPARATOR



P. Heggernes, P. van 't Hof, D. Marx, N. Misra, Y. Villanger

Finding separators with non-hereditary properties

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Finding separators with non-hereditary properties

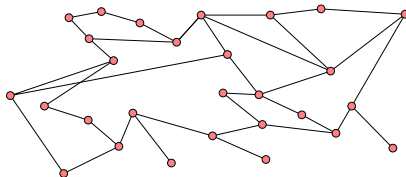
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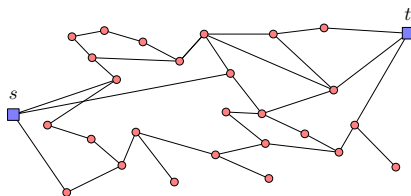
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Finding separators with non-hereditary properties

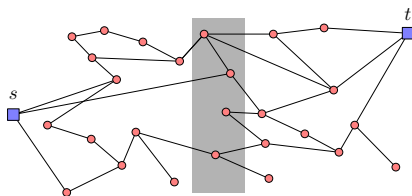
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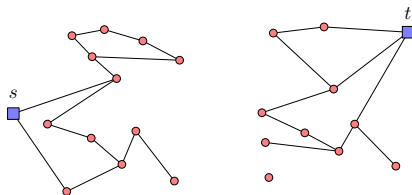
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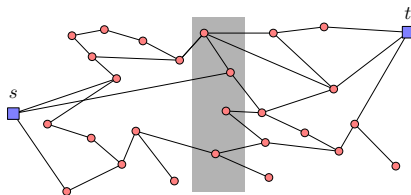
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Preprocessing the input graph

Step 2: **Cleaning the graph G' .**

THREE-IN-A-PATH

Instance: A graph G and three vertices v_1, v_2, v_3 of G .

Question: Does G have an induced path containing v_1, v_2, v_3 ?

Theorem (Derhy & Picouleau, 2009)

The THREE-IN-A-PATH problem is NP-complete.

Corollary

In general, the problem of determining if a vertex x is irrelevant for two vertices s and t is NP-complete.

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Also:

- ▷ don't **overestimate** your audience

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Also:

- ▷ don't **overestimate** your audience
- ▷ but don't **underestimate** it either

After you have prepared your slides:

- ▷ practice your talk **out loud**
- ▷ implement (good) suggestions from others
- ▷ practice again

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Preparations: **done**.

Now sit back and **enjoy your flight!**

Part ②: What to do during the conference?

YOUR CONFERENCE PRESENTATION

HOW YOU PLANNED IT:



YOUR CONFERENCE PRESENTATION

HOW YOU PLANNED IT:



HOW IT GOES:



YOUR CONFERENCE PRESENTATION

HOW YOU PLANNED IT:



self-aggrandizement

n

the act of increasing one's own power, importance, etc., esp in an aggressive or ruthless manner

self-aggrandizing *adj*

HOW IT GOES:



During one of the **breaks** before your talk:

- ▷ find your chair
- ▷ agree on the rules
- ▷ test the equipment

Your session has started: **you're up next...**

To overcome your **nerves**:

- ▶ memorize the first few sentences
- ▶ find nodders
- ▶ ignore frowners
- ▶ remember: nobody knows what you want to say

If you **run out of time**:

- ▷ **never** argue with the chair
- ▷ don't speed up, but skip
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If you're **ahead of time**, remember that

- ▷ **nobody** minds if you finish 5 minutes early
- ▷ **everybody** minds if you finish 2 minutes late

If you get asked **questions** afterwards:

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- ▷ be patient
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Q1: “You applied technique X to solve problem Y . Do you think technique X can also be applied to solve problem Z ?”

Possible answers:

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Possible answers:

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- ▷ “I’m not sure. It might be possible; I would have to think about it.”

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- ▷ ...

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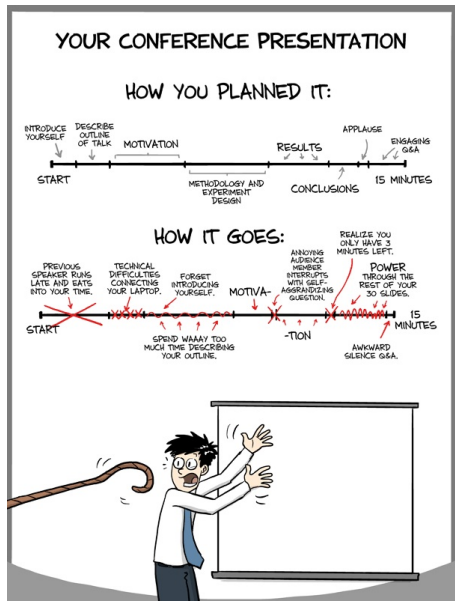
Q2: “I think I have a much simpler and faster algorithm for solving your problem. You just do ⟨insert algorithm this person came up with during the last 10 minutes of your talk⟩. Why doesn't that work?”

Applause!

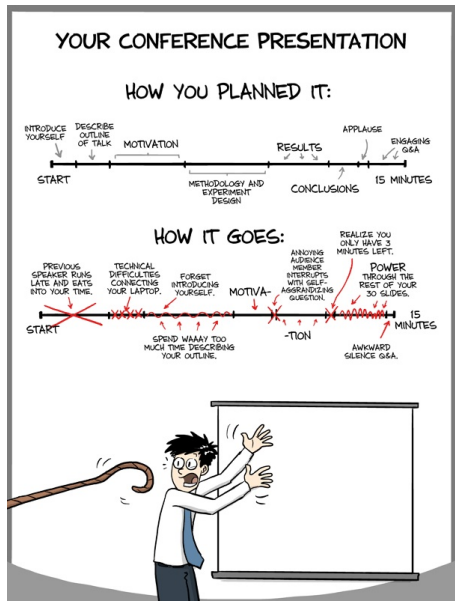
And now, sit back and relax...

Some **final remarks** to take home:

- ▷ practice, practice, and then practice again
- ▷ learn from other people
- ▷ enjoy!!



Thank you.



Source: <http://www.phdcomics.com/>