Papers, reviews, rebuttals, conferences, and talks: some general advice on things to do (and avoid)

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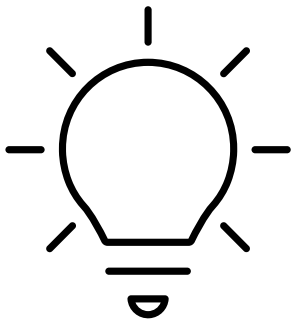

Avoid...

... long talk titles.

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Keep things sharp: don't lose your audience!

Use pictures and icons. They anchor the message.

Repeat the important messages and notions.

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Do not overcrowd your slides.

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It is a talk, not a paper! "Small lies" and simplified versions are better than overwhelming details.

Theorem 1.3. *There exists a computationally efficient tester for $\mathcal{T}(\ell_1, \ell_2, n, \varepsilon)$ with sample complexity*

$$O\left(\max\left(\min\left(\frac{n^{7/8}\ell_1^{1/4}\ell_2^{1/4}}{\varepsilon}, \frac{n^{6/7}\ell_1^{2/7}\ell_2^{2/7}}{\varepsilon^{8/7}}\right), \frac{n^{3/4}\ell_1^{1/2}\ell_2^{1/2}}{\varepsilon}, \frac{n^{2/3}\ell_1^{2/3}\ell_2^{1/3}}{\varepsilon^{4/3}}, \frac{n^{1/2}\ell_1^{1/2}\ell_2^{1/2}}{\varepsilon^2}\right)\right),$$

where we assume without loss of generality that $\ell_1 \geq \ell_2$.

Theorem. (Special case: $\ell_1 = \ell_2 = 2$) There is an efficient algorithm with sample complexity

$$O\left(\max\left(\frac{n^{1/2}}{\varepsilon^2}, \min\left(\frac{n^{7/8}}{\varepsilon}, \frac{n^{6/7}}{\varepsilon^{8/7}}\right)\right)\right)$$

and this is optimal.

The first term dominates when [...]

Don't copy/paste from your paper.

It's tempting. I've done it. Everyone does. Don't.

(I'm using PowerPoint for a reason)

Testing Uniformity (2)

Getting our hands dirty.

Algorithm 1: PCOND$_D$-TEST-UNIFORM

Set $t = \log(\frac{4}{\varepsilon}) + 1$.
Select $q = \Theta(1)$ points $i_1, \ldots, i_q$ uniformly {Reference points}
for $j = 1$ to t **do**
    Call the SAMP$_D$ oracle $s_j = \Theta(2^j t)$ times to obtain points $h_1, \ldots, h_{s_j}$ distributed according to D {Try to get a heavy point}
    Draw s_j points $\ell_1, \ldots, \ell_{s_j}$ uniformly from $[N]$ {Try to get a light point}
    for all pairs $(x, y) = (i_r, h_{r'})$ and $(x, y) = (i_r, \ell_{r'})$ **do**
        Call $\textsc{Compare}_D(\{x\}, \{y\}, \Theta(\varepsilon 2^j), 2, \exp^{-\Theta(t)})$.
        if it does not return a value in $[1 - 2^{j-5}\frac{\varepsilon}{4}, 1 + 2^{j-5}\frac{\varepsilon}{4}]$ **then**
            output REJECT (and exit).
        end if
    end for
end for
Output ACCEPT

But that's the slides, what about getting a talk?

Be shameless. Ask.

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Ask your supervisor and coauthors to introduce you.

Cold email weekly seminar organisers.

It's not weird! They're looking for speakers!

Give talks at your own department, School, or group.

It's good practice, and a way to get feedback!

(also, see last point of previous slide)

What about conferences?

Go to conferences whenever you can.

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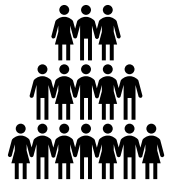
(You're here, so that's a good sign)



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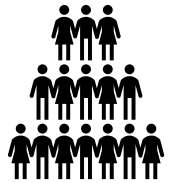
If you have a paper: of course!

If you don't: still worth it

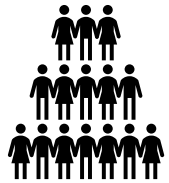
Networking and making connections, getting a sense of the field, learning what others are doing...



Conferences are awkward at first*

(It gets better!)

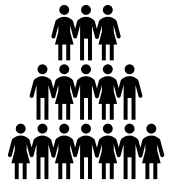
* and second, and third…



"Go to conferences whenever you can."

But those things cost money?

Be shameless. Ask.



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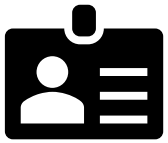
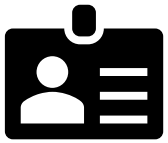
Apply for travel grants.



Make a website.

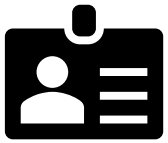


Make a website.

Google Scholar is not enough.

Your University profile is not enough.

People need to be able to know what you're working on!



Make a website.

(People you meet at conferences won't follow up if they can't find you on Google. People won't invite you to give a talk if they cannot find your email address.)

(It does not need to be fancy! Web 1.0 is fine.)

Reviews and rebuttals?

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Bad reviews are tough. For everyone.

It does get (a little) better.

Sleep on them. Take a one-day break.

Reviews and rebuttals?

(You can contact the AC if you think a reviewer is objectively missing the point or biased.)

Papers!

Cite generously. If it's relevant, cite. (If it's not, don't.)

Don't be stingy on the literature review!

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Writing is important.

Reviewers have short attention span.

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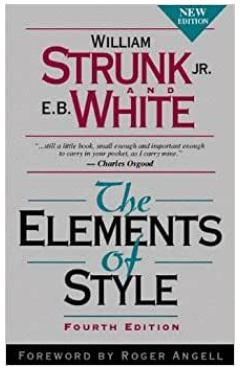

And again...

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Avoid giving too much field-specific advice:
things vary across areas!