PRESENTATION TECHNIQUES

Methodology for Research in Networking

M2 — Networking

Sorbonne Université

2018-2019

WHY THIS CLASS?

- Presentation is a major step of your work
- What are the other two?
  - 1: The work itself
  - 2: Convincing the “reviewer”
- Possible “publicity” of your work
  - Get feedback before submission / final release

GENERAL RECOMMENDATIONS

TYPES OF PRESENTATIONS

- Support type
  - ✓ Oral presentation
  - ✓ Poster presentation
  - ✓ None…
- Presence type
  - ✓ In front of public
  - ✓ Through a video conferencing system

WHAT IS YOUR TARGET AUDIENCE?

WHO IS INTERESTED IN YOUR WORK?

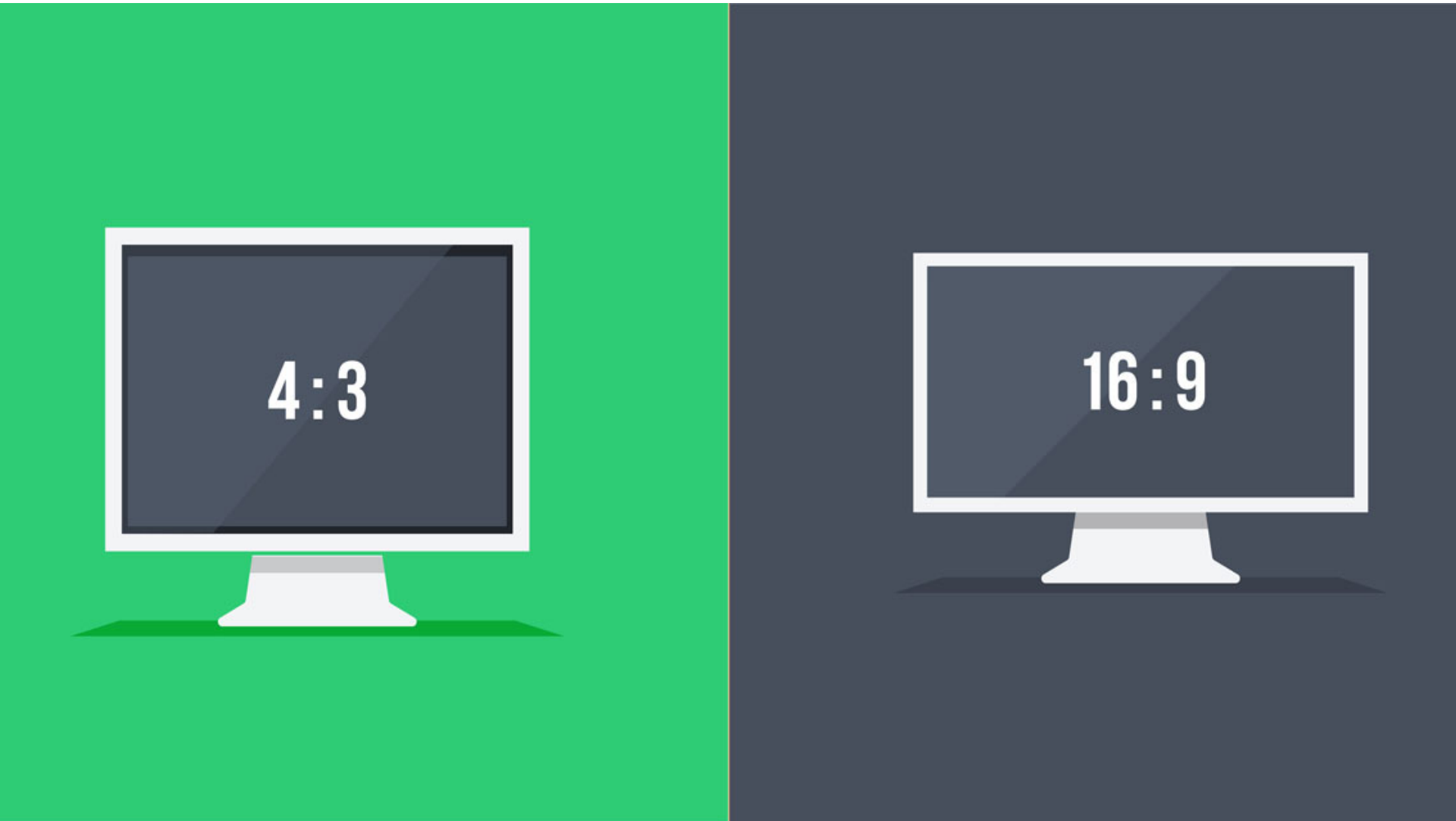
- At best, a few people in the audience
  - ✓ Even when it should be for their own interest (e.g., classroom)
- Who has the required background?
  - ✓ You have…

GIVE A GOOD IMPRESSION

- You should master your subject
  - ✓ If you don’t, people will notice
  - ✓ Although it is not always possible…
- Prepare your material before
  - ✓ Start your computer beforehand
  - ✓ Battery charge
  - ✓ Adaptors

IF POSSIBLE, CHECK ROOM BEFORE...

SIZE OF PROJECTION



VIDEO...

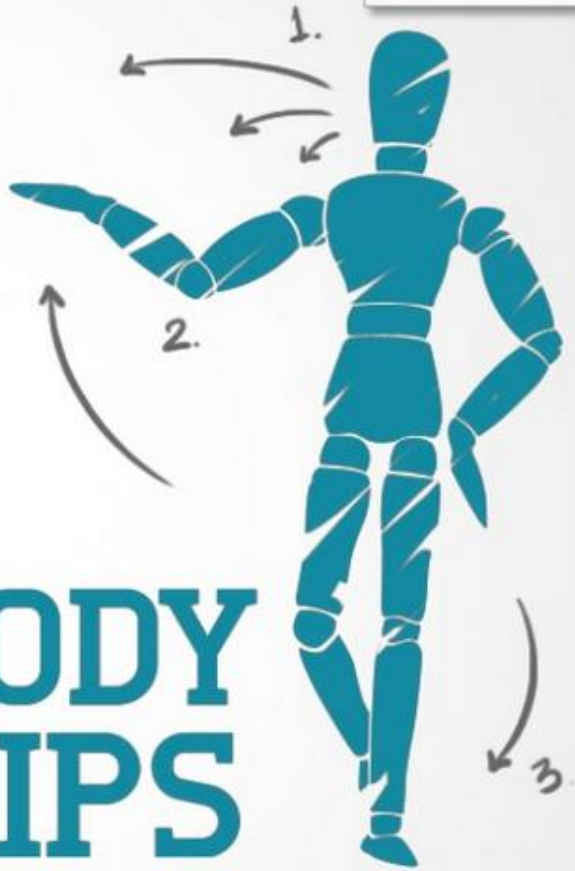
- Eye contact

BUT…

- The previous guy is a specialist
- What about us?
- At least
  - ✓ Avoid staring at the slides
  - ✓ Try to move a bit (when possible)
  - ✓ And the following list…

10 POWERFUL BODY LANGUAGE TIPS

for your next presentation



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TO BOOST YOUR CONFIDENCE
DURING YOUR PRESENTATION,

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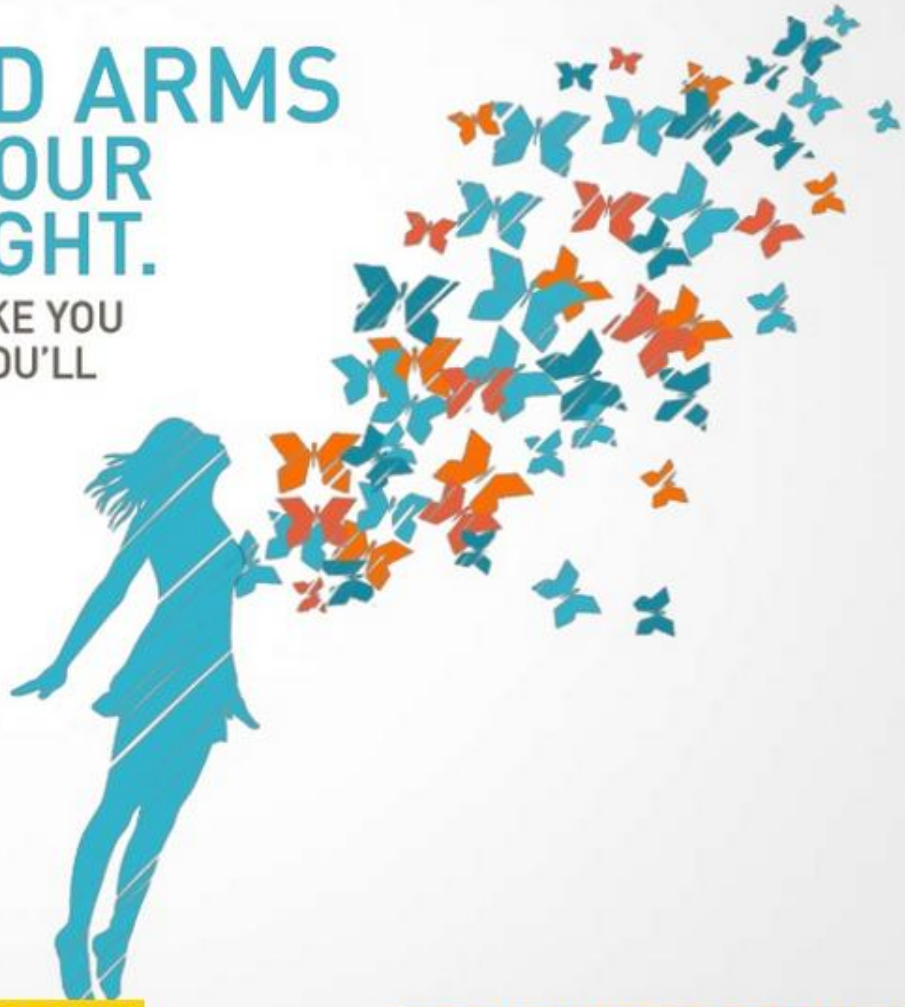
1

TO BOOST YOUR CONFIDENCE DURING YOUR PRESENTATION,

OPEN YOUR CHEST AND ARMS AND KEEP YOUR BACK STRAIGHT.

THIS POSITION WILL MAKE YOU BREATHE BETTER AND YOU'LL FELL MORE RELAXED.



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TO MAKE
YOUR AUDIENCE
COMFORTABLE,

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TO MAKE
YOUR AUDIENCE
COMFORTABLE,
SIMPLY

SMILE

AT THEM.

SMILING IS OUR MOST
POWERFUL WEAPON.

2

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TO ENGAGE PEOPLE,

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3

TO ENGAGE PEOPLE, GESTURE WITH YOUR
ARMS AND HANDS
IN A NATURAL WAY,
AND LOOK YOUR AUDIENCE
IN THE EYE.
PEOPLE TEND NATURALLY TO
PAY ATTENTION
AND TO LIKE PEOPLE WHO
LOOK THEM IN THE EYE.

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TO DEMONSTRATE

AUTHORITY,

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TO DEMONSTRATE

AUTHORITY, KEEP CALM

AND USE SMALL AND STIFF GESTURES.

THIS WAY PEOPLE WILL

TRUST YOU

AND VIEW YOU AS

A CONFIDENT PERSON.

4

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TO BRING MOVEMENT TO YOUR SPEECH,

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TO BRING MOVEMENT TO YOUR SPEECH,
USE THE PHYSICAL SPACE YOU HAVE AVAILABLE AND

WALK IT.

FOR EXAMPLE, IF YOU'RE PRESENTING THREE POINTS,
TALK ABOUT POINT A WHEN YOU'RE AT YOUR FIRST POSITION;
THEN MOVE OUT 2 OR 3 STEPS AND TALK ABOUT POINT B;
THIS WAY, A MOVEMENT THAT INCLUDES SPACE WILL ACCOMPANY

YOUR SPEECH.

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TO KEEP YOUR AUDIENCE'S ATTENTION,

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TO KEEP YOUR AUDIENCE'S ATTENTION,

VARY YOUR GESTURES

THROUGHOUT THE PRESENTATION.
OPEN GESTURES, SMALL GESTURES.
GESTURES THAT INVOLVE YOUR

HEAD, ARMS AND HANDS,

GESTURES THAT INVOLVE ONLY YOUR HANDS,
OR ONLY YOUR HEAD, BROAD GESTURES....

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TO DRAW ATTENTION TO A CERTAIN ELEMENT OF THE PRESENTATION,

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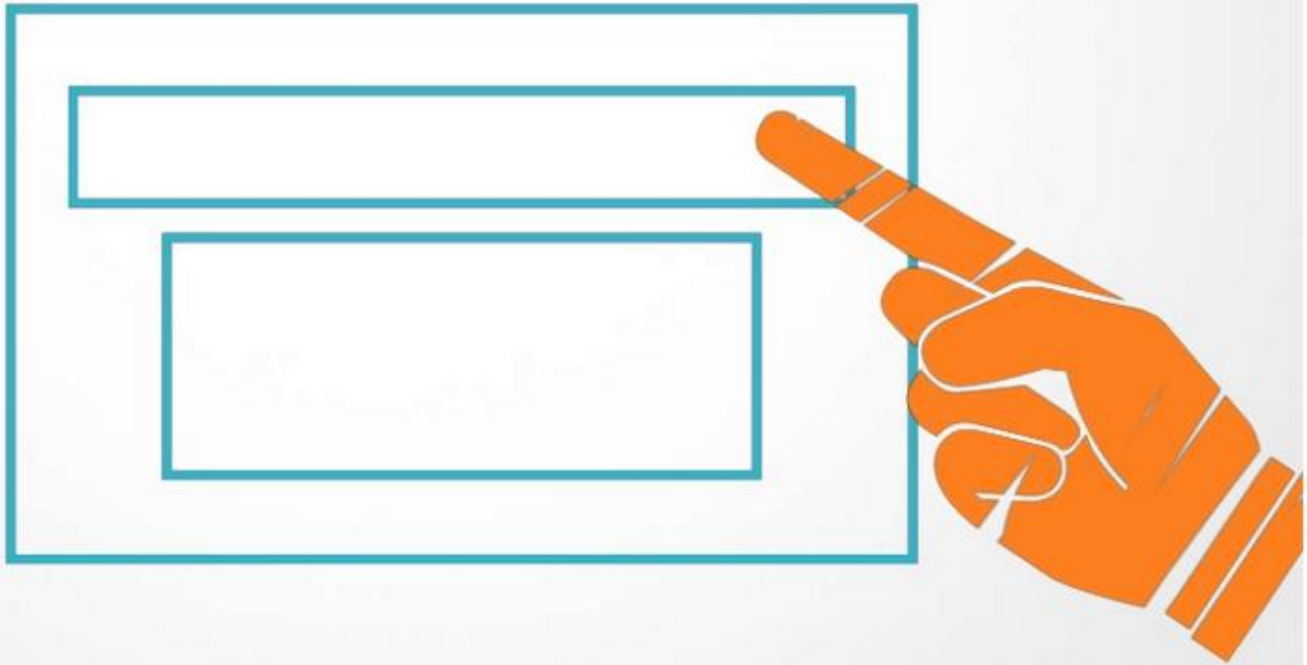
TO DRAW ATTENTION TO A CERTAIN ELEMENT OF THE PRESENTATION,

POINT DIRECTLY AT IT AND LOOK AT IT ON THE SCREEN

AT THE SAME TIME. YOUR AUDIENCE WILL FOLLOW YOUR EYES AND FINGER.



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TO ENCOURAGE AUDIENCE PARTICIPATION,

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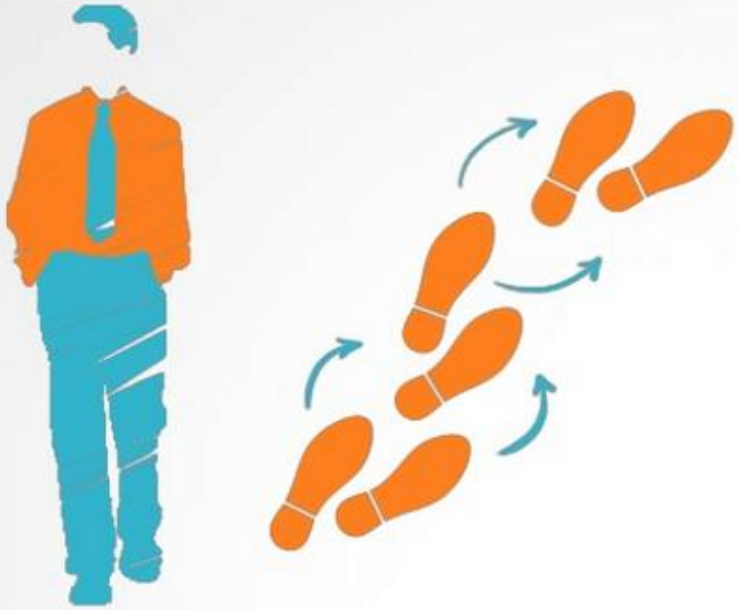

TO ENCOURAGE AUDIENCE PARTICIPATION,

USE OPEN GESTURES

AND IF POSSIBLE

WALK AROUND AND TOWARD PEOPLE.

WE TEND TO PARTICIPATE MORE WHEN WE HAVE PROXIMITY TO A SPEAKER.

8

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TO MAKE A HARD QUESTION SEEM EASIER,

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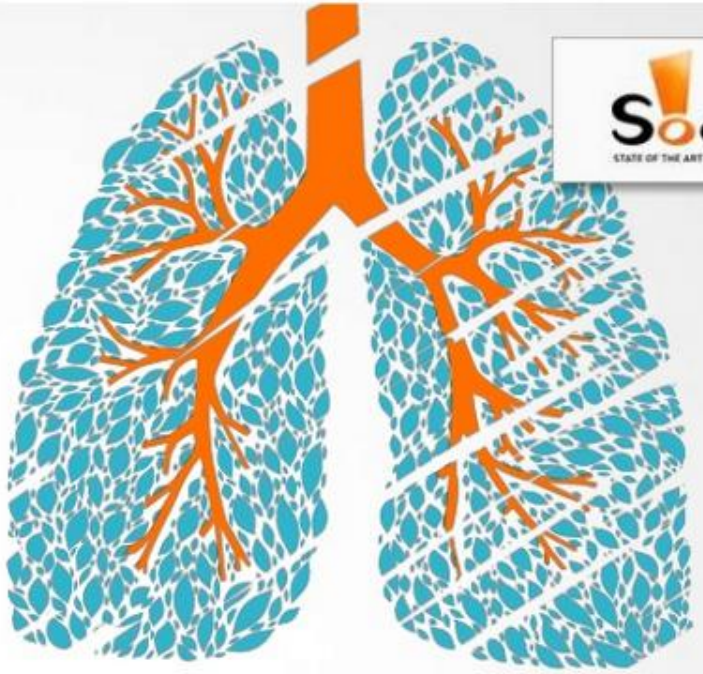

9

TO MAKE A HARD QUESTION SEEM EASIER,

PAUSE, BREATHE SLOWLY

(THIS WILL GIVE YOU TIME TO THINK)

AND THEN

ANSWER WHILE LOOKING THE QUESTIONER IN THE EYE.

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TO MAKE YOUR
AUDIENCE BUY
YOUR STORY,

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10
TO MAKE YOUR AUDIENCE BUY YOUR STORY,
USE POSITIVE GESTURES
DURING THE ENTIRE PRESENTATION:
NODDING, OPEN GESTURES, SMILING, MIRRORING, ETC.
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EXERCISE 1

YOUR PROJECT

- Prepare a speech for your project
  - ✓ Between 1’30’’ and 2’00’’
- Present
  - ✓ Get feedbacks from 3 colleagues
- Write it down in the paper
  - ✓ Comments for your colleagues (indicate names)
  - ✓ Comments for all

PREPARING YOUR PRESENTATION

YOU NEED TIME TO PREPARE

You need time to prepare

YOUR AUDIENCE HAS LIMITED CAPACITY

- Concentration decreases with time
  - ✓ 1 hour → 1~2 ideas
  - ✓ 2 hours → 0.5 idea
- Further information after the talk
  - ✓ People really interested show up

VIDEO...

- 10/20/30 rule

TALKS != PAPERS

- In the talk, only the most important points
  - ✓ Details are in the paper
- Forget about equations whenever possible

- Look at the following two slides
  - ✓ True story…

Theoretical results on the connectivity, dynamics, and performance of routing protocols for wireless ad hoc networks (in the broad sense) are typically obtained either through simulation on mobility models [2] or from considerations on random temporal graphs [3]. The former boast a more realistic physical model while the latter are simpler to manipulate and allow for explicit calculations. Furthermore, asymptotic capacity results may also be obtained from synthetic mobility models [4]. These approaches must be confronted to experimental data from real-life traces where attention has been focused on the inter-contact time distribution. When the underlying social dynamics are strong, this distribution follows a power law [5]. However, in different scenarios, it may follow an exponential law [2]. Interestingly, any mobility model in a bounded domain necessarily has an exponential cutoff [6]. Random graph based approaches, including ours, also have an exponential (or geometric) inter-contact time distribution.

Temporal graphs, time-indexed sequences of traditional static graphs, appear naturally when analyzing connectivity traces in which nodes periodically scan for neighbors. Indeed, the topology of a real-life network of mobile devices evolves over time as links come up and down. Successive snapshots of the evolving connectivity graph yield a *temporal graph*. Their theoretical study is therefore important for understanding the underlying network dynamics. This, however, is a relatively unexplored field. Previous work on dynamic graphs focused on graphs with increasing numbers of vertices or edges [7], but does not account for node mobility and/or link instability.

We consider a network with N nodes. Each of the potential $\frac{N(N-1)}{2}$ links is considered independent and can be in one of two states: either $\uparrow$ or $\downarrow$. Rather than using a fixed probability p of being in the $\uparrow$ state, we model each link by a two-state Markov chain where q_c (resp. q_i) is the probability that the link remains in the $\uparrow$ (resp. $\downarrow$) state. The subscripts c and i stand for *contact* and *inter-contact*, respectively.

Every time step, all links perform one transition of their Markov chain. If $0 < q_i < 1$ and $0 < q_c < 1$, this chain is positive recurrent and aperiodic, and thus ergodic. In the rest of this paper, we will use the following two parameters: $r = \frac{1}{1-q_c}$ and $\lambda = \frac{1-q_c}{1-q_i}$. The contact ($T_c$) and inter-contact ($T_i$) times are distributed geometrically and their expected values are $E(T_c) = r\tau$ and $E(T_i) = \lambda r\tau$. Let $\pi_\uparrow$ (resp. $\pi_\downarrow$) be the stationary probability of being in state $\uparrow$ (resp. $\downarrow$). We have $\pi_\uparrow = \frac{1}{1+\lambda}$ and $\pi_\downarrow = \frac{\lambda}{1+\lambda}$.

Here, r is the average number of time steps that a link spends in the $\uparrow$ state, while λ is the fraction of time that a link spends in the $\downarrow$ state. In a sense, r measures the evolution speed of the network's topology while λ is related to its density. The average link lifetime is by definition $r\tau$ while the average node degree is $\frac{N-1}{1+\lambda}$. Since we are considering discrete time steps, links cannot remain less than 1 time step in a given state. Hence, $r \geq 1$ and $\lambda \geq \frac{1}{r}$.

ATTENTION IS KEY

- Catch the attention of your public
- Figures help a lot
  - Of course, if well done…
- The first minute is crucial

EXERCICE 2

EXERCISE

- Spot the mistakes (video)…

HOMEWORK

HOMEWORK

- Prepare slides for the following paper
  - J. Rexford and C. Dovrolis, "Future Internet architecture: Clean-slate vs. evolutionary research," *Communications of the ACM*, September 2010.
  - Think of a **5-minute** presentation
- Rules
  - Upload slides in PDF format
  - Bring the slides to class 11

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  - Bring the slides to class 12

DEADLINE: OCT. 24, 2018 – 11PM