

Communication in Computer Science

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GTTSE, Lecture 3/3

8 July 2011

The complete title

Tips and Tricks
for Communication in Computer Science:
Reviews, Papers and Talks

The point

You have to give a talk:

- scientific (seminar, retreat, or conference);
- interview (post-doc, job);
- other (oral exam / PhD defense, teaching, administrative meeting, lunch / dinner).

Commonalities

You are the speaker.

You have an audience

You want to transmit an information.

You use a medium:

- your voice;
- your body language;
- a black/white/active board;
- slides (possibly computerized).

Specifics

The information is new to the audience:

- scientific talk;
- teaching;
- administrative meeting.

The information is known to the audience:

- oral exam.

Information and meta-information

Interview talk: you want to express that

- you are well-rounded, and
- you have potential.

Why giving a good talk?

- To do justice to your topic.
- To not waste your audience's brain cycles.

Before the talk: what to say

Assumption: you have a message.

- A thesis.
- A refutation.
- A theorem or a corollary.
- An idea.
- A report (implementation, benchmarks).
- A tutorial.

The content of the talk

- Think backwards: what do you want people to remember from your talk?
- Don't say everything.
- Simplify.

Rumour: people can only remember

5 new things from a talk.

Rules of thumb

Of course rules are made to be broken,
but still: be aware of

- which message you want to send, and
- what you want your audience to remember.

Make at least one point comprehensively.

Before the talk: how to say it

Use all the help you can round up, e.g., slides.

Alternatives include:

- passive demo (film);
- interactive demo (always risky).

What is the point of a slide?

It supports and guides your talk.

Try to cooperate with your slides!

Writing slides

Non-goal: editing or writing the slides upfront.

Danger:

- atomic and linear view;
- irrelevant formatting concerns.

Active goal: the comic strip

Assemble your future slides

on a hand-drawn comic strip:

- it gives you an overview (1 to 2 pages);
- you can't write too much on each slide.

Question: how many slides per minute?

Active means: the plan

Planning is not like playing Lego.

It reflects your understanding,
and thus it evolves with time.

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It reflects your understanding,
and thus it evolves with time.

You should not plan your talk
in the same **chronological** order
as you carried out your research.

You probably chose
a **logical** plan
for the paper.

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Choose a **pedagogical** plan
for the presentation
(i.e., one adapted to the audience,
the duration of the talk, etc.).

Before the talk

Try to immerse yourself
in what you are going to say
(e.g., by giving the talk to yourself).

Final preparation step

Contact the session chairperson.

Agree about

- the length of the talk, and
- the signals (5', 1', stop).

Right before the talk

Do:

- Be comfortably dressed.
- Breathe deeply.

Don't:

- Drink a carbonated beverage.

During the talk

Plan:

- You (the speaker).
- Handling the slides.
- What can go wrong.

Conducting the talk

- Straighten up.
- Face the audience.
- Convey that you are happy to be here.
- Dare to speak slowly and loudly.

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Accept that in the end, by giving a talk,
you express who you are.

How to say it

- Speak slowly and loudly.
- Speak for the others (not for yourself).
- Don't force your voice:
 - lower for males (to inspire confidence);
 - higher for females (to inspire mercy).

How to say it (ended)

- Be balanced: don't let your tone
 - fall down (it sounds sad and depressed);
 - jump up (nobody is strangling you).
- There is no need for “uptalk”:
it sounds so tentative.

Don't be afraid: e pluribus unum.

A historical precedent

July 1909:

Louis Blériot crosses the English channel
by plane.

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by plane.

“No, I wasn’t worrying about the waves below.
I was watching my engine.”

Conducting the talk: the opening

1. put the front slide;
2. get installed (microphone, etc.);
3. try your voice (see next slide);
4. start the talk proper (e.g., with a slide entitled “Introduction” or better “Motivation”).

Trying your voice

At a conference:

- avoid “Can everybody hear me?”;
- “This is joint work with XXX.” is good;
- “This work was carried out at YYY.” is fine.

At a seminar:

- thank your host;
- if you are happy to be here, say so.

Starting the talk

(with your tried and true voice)

- What are your credentials?
- Captatio benevolentiae.
- Common points with your audience.

The talk proper

Use a roadmap (an annotated plan of the talk).

Be **intelligible**.

Be **articulate**. If appropriate, remember to say:

- “There is more detail in the paper.”
- “Copies of the slides are available at the exit.”
- “Are there any questions?”

Specifics: giving a talk at a conference

Setting: short and limited time (20-25 min).

- You want people to read your paper.
- You want those who already read it to appreciate one specific thing.
- If your paper has **several** points, you can only make **one** of them.

Specifics: giving a talk at a seminar

Setting: longer but limited time (45-60 min).

Warning: your **assumptions**,
not your **contribution**, can be questioned.

The risk increases:

- for an interview talk; and
- at top places (MIT, CMU, Bell Labs).

Giving a talk at a seminar (ended)

Recommendations:

- be well-prepared,
- be very clear about your goal, and
- don't hesitate to say “this is not the point”, or even “just give me a chance”
(and then grab it).

Giving a talk at a seminar + discussion

Setting: 45-60 min + 1 or 2 hours.

Examples:

- ENS Paris (Patrick Cousot);
- Northeastern University (Mitchell Wand).

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Recommendations:

- be **very well prepared**, and
- be ready **to have fun** and **to learn new things**.

Specifics: giving a talk at a colloquium

Setting: longer time (1h).

- Do your very best.
- Keep the distance.
- Don't get lost.

Conducting the talk: the ending

- Announce the ending
(e.g., with a slide entitled “Conclusion”).
- Summarize the background
(and thus the significance of your work).
- Summarize the achievements
(especially at your PhD defense).
- Open perspectives (future work).

Conducting the talk: the very end

And

- either say “thank you;
are there any questions?”,
- or say “thank you”
and let the chairperson take over.

Display a meaningful last slide!

Message vs. messenger

What is the finality of your talk:

- that **the message went through?**

or

- that **it was you who delivered it?**

Don't

overestimate your audience:

you probably have spent more time
thinking about your problem
than most people here;

underestimate your audience:

there is always the risk
that a world specialist is here.

Don't

underestimate yourself:

you come from a good university
and you are well-prepared;

overestimate yourself:

prepare your talk well.

Beware of

starting the talk by cracking a joke:
it might be distracting.

(On the other hand, a humorous sentence
can **wake up the audience**
or **make it focus on what you want to say.**)

Try to avoid (1/3)

Long visual pauses (esp. on a blank screen).

Sound effects.

Slides displayed too quickly.

Try to avoid (2/3)

Correcting slides on the fly.

Making self-comments.

Covering your mouth with your hand while speaking (even if it feels **so good**).

Hum, ah, er..., mmmh, etc.

Try to avoid (3/3)

Overdoing anything:

- colors,
- fonts,
- background,
- animations,
- etc.

Running out of slides

This is not a disaster.
Short talks are appreciated.

Running out of slides: what to do

- Conclude unhurriedly
and summarize the main point of the talk
(don't repeat the talk though);
- say “thank you; are there any questions?”.

Running out of slides: what **not** to do

- make a personal comment

(“hum, I am running out of slides again”
or some such); that looks so bad.

Rationale: what matters is **the message**,
not **the messenger**.

Running out of time

Golden rule: you should conclude properly.

Running out of time: what to do

- Finish your current point as quickly as possible;
- say “for the rest, you should read the paper; let me jump to the conclusion”; and
- put on the conclusion slide and **conclude properly**.

Running out of time: what **not** to do

- make a personal comment
 (“hum, I am running out of time again”
 or some such); that looks so bad.

Rationale: what matters is **the message**,
not **the messenger**.

Right after the talk

Plan:

- Handling questions.
- And if there are no questions?

Handling questions

The golden rule still applies:

ALWAYS repeat the question.

It gives you time to **identify its nature**.

- **Technical question**: give a technical answer.
- **Friendly question**:
use it to make your point even better.
- **Challenging question**: be upfront.

Example question #1

Q. Wouldn't it have been simpler to use co-induction?

A, Version 1: The question is: “Wouldn't it have been simpler to use co-induction?”

That's a very good point. No. I tried, and it is actually simpler to use induction.

A, Version 2: The question is: “Wouldn’t it have been simpler to use co-induction?”

That’s a very good point. Perhaps. That’s worth looking into.

Example question #2

Q. Wasn't this known already?

A. The question is:

“Wasn't this known already?”

To the best of my knowledge, no,
it was not known already.

Example question #3

Q. Isn't your main theorem a corollary of Erdős's theorem?

A. The question is: "Isn't my main theorem a corollary of Erdős's theorem?"

Good question.

Which theorem do you have in mind?

Example question #4

Q. Blah blah blah. Blah blah. Blah blah blah
blah blah. Blah blah blah blah blah blah blah
blah blah blah blah blah blah?

A. The question I believe is “Blah blah?”
...(and then for an appropriate answer)...

Example question #4 (Tony Hey)

Q. Blah blah blah. Blah blah. Blah blah blah
blah blah. Blah blah blah blah blah blah blah
blah blah blah blah blah blah?

A. Could you crystallize what you said
into a question?

Example question #5

Q. I don't like your approach at all.
(Blah blah blah.)

A. I am sorry. What was your question?

Example question #6

Q. More than a question,
I want to make a comment. Blah blah blah.

A. Thank you very much.

Do

Make sure that
all the terms of the question are defined.

When you speak, be careful with idioms
when you are not a native speaker.

Don't

Don't use slang,

especially if you are not a native speaker.

Slang terms mean something else

than what you think it means.

(cf. “Inconceivable!” in *The Princess Bride*)

If the question is “What is X?”,

don't say: “X, it's when ...”

It reveals muddled thinking.

At an oral exam, don't say

“I knew you would ask this question.”

Example question #8

Prof. Lebowski: What is your contribution exactly?

Ans. (not): (see next slide)

I ran the benchmark exactly as per – look, man, I’ve got certain information, all right? Certain things have come to light, and – y’know, has it ever occurred to you, that, instead of, uh, y’know, running around, uh, uh, blaming me, y’know, given the nature of all this new thing, y’know, i-i-i-i-this could be a-a-a-a lot more, uh, uh, uh, uh, uh, uh, complex, I mean, it’s not just, it might not be just such a simple... uh, y’know?

Kill your darlings

Note:

The previous slide was a darling
I should have killed.

And if there are no questions?

- Say “thank you” again, and pack up.
- If you have a computer demo,
now is a good time to remind the audience.
- (seen at TLCA’01)
“Good! Then
let me show you a couple more slides.”

After the talk

Plan:

- At the session break.
- At the next meal.
- After hours.
- After the conference.

At the session break

Make yourself visible,
and be ready for more questions.

At the next meal

Don't make lunch or dinner plans.

Be available for discussions.

After hours

Be available for discussions.

After the conference

Promptly acknowledge good receipt of any e-mail.

Always check with your co-authors before answering in earnest.

Receiving a talk

Be prepared:

- Read the proceedings the evening before.
- Go and talk shop with the authors: they came here for that.

Tips for graduate students at a conference

Don't hope too much to find

Someone Important who will listen to you.

But professors love to talk, so go ahead and
ask them about their research.

(Theorem: even if they are busy,
professors will tell you about their research.)

Corollary:

A tip for Indian students
applying to internships

Personalize your application letters!

Sanity check

Keep notes about

- who is who,
- whom you talked to,
- what you said, and
- what you were told.

As a session chairperson (1/2)

Meet all the speakers prior to your session.

Agree with them about the signals (5', 1', stop).

Make sure the speaker sees your signals
(in the worst case, get up
and walk to the side of the screen).

As a session chairperson (2/2)

Act as a moderator for the questions.

Be kind and have a question ready in case there are no questions, especially if the speaker is young.

Keep your session on time, esp. if there are parallel tracks.

Conclusion

Again, these are just guidelines:

suit them to your needs.

In any case, do what I said, not what I did here:

write a comic strip before your talk;

remember to breathe during your talk;

repeat each question after your talk.

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Again, these are just guidelines:

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Merci.