

FAKULTA MATEMATIKY,
FYZIKY A INFORMATIKY
Univerzita Komenského
v Bratislave

Metatalk

or talk about giving talks

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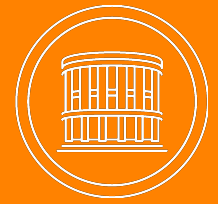
Department of Theoretical Physics



Apr 14, 2026, CaLISTA Training School, Facultat de Física, Universitat de València







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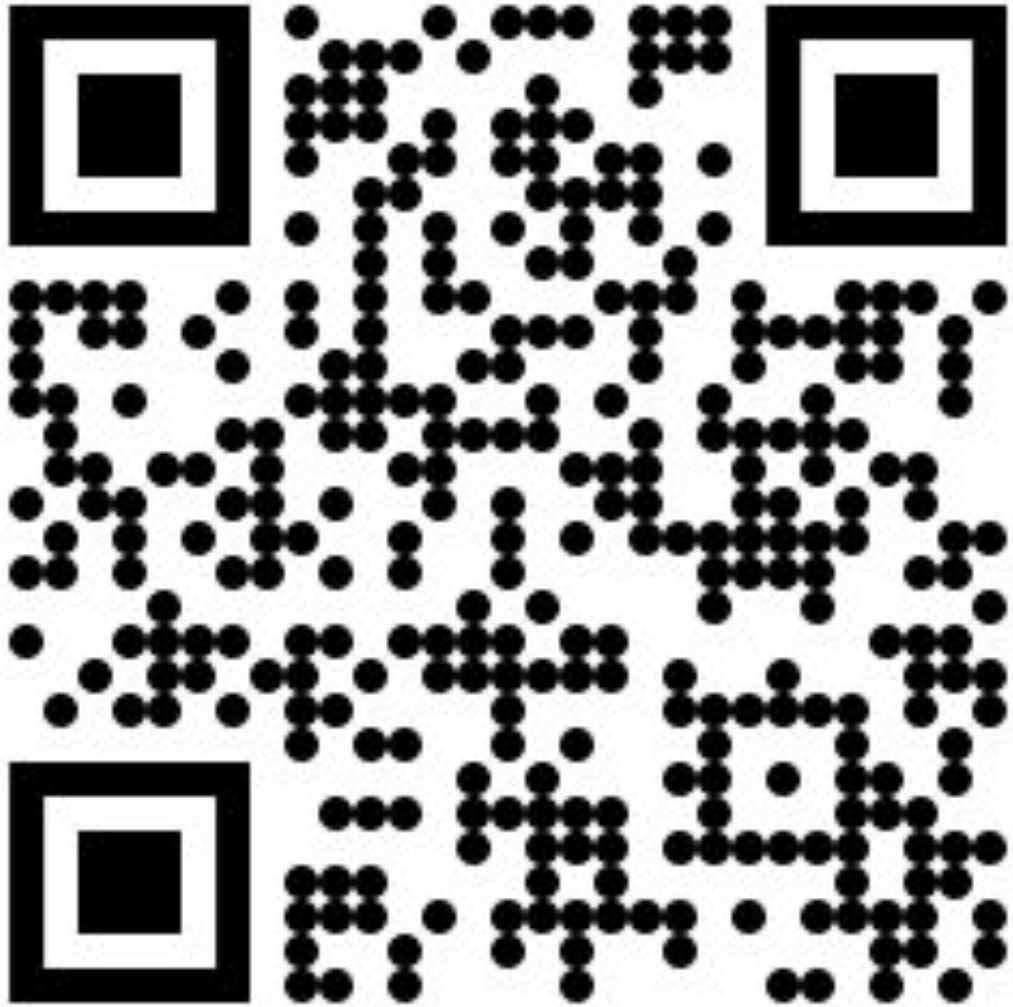






Take home message

Take home message

- **Never, ever, under any circumstances go over your time.**
- Talks are (very (very)) important.
- Giving talks is a skill, which can be worked on.
- Think of giving a talk as telling a story.

What lies ahead?

- Theory:
  - structure of talk,
  - advice.
- Practice

Note on AI

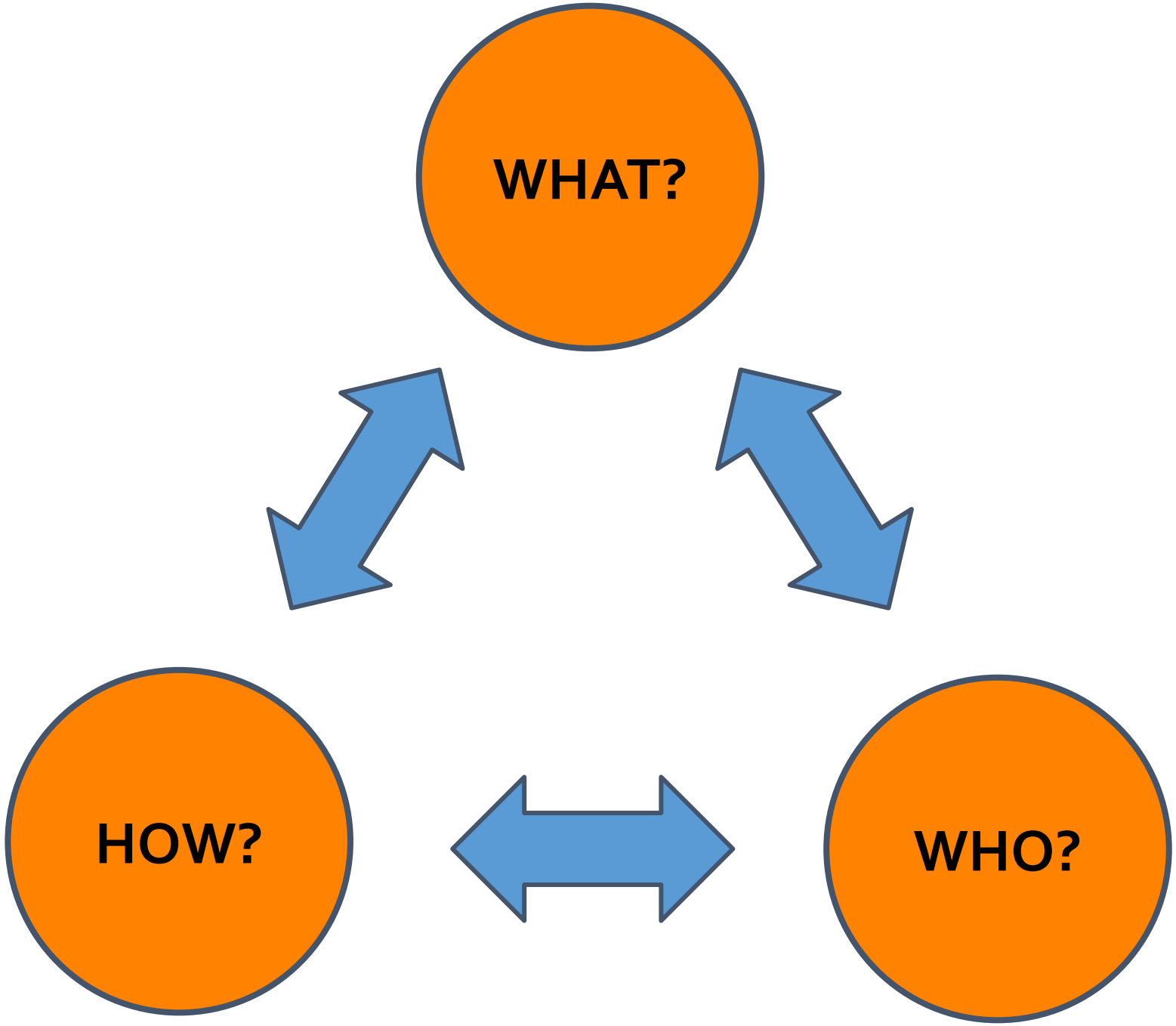
Note on AI

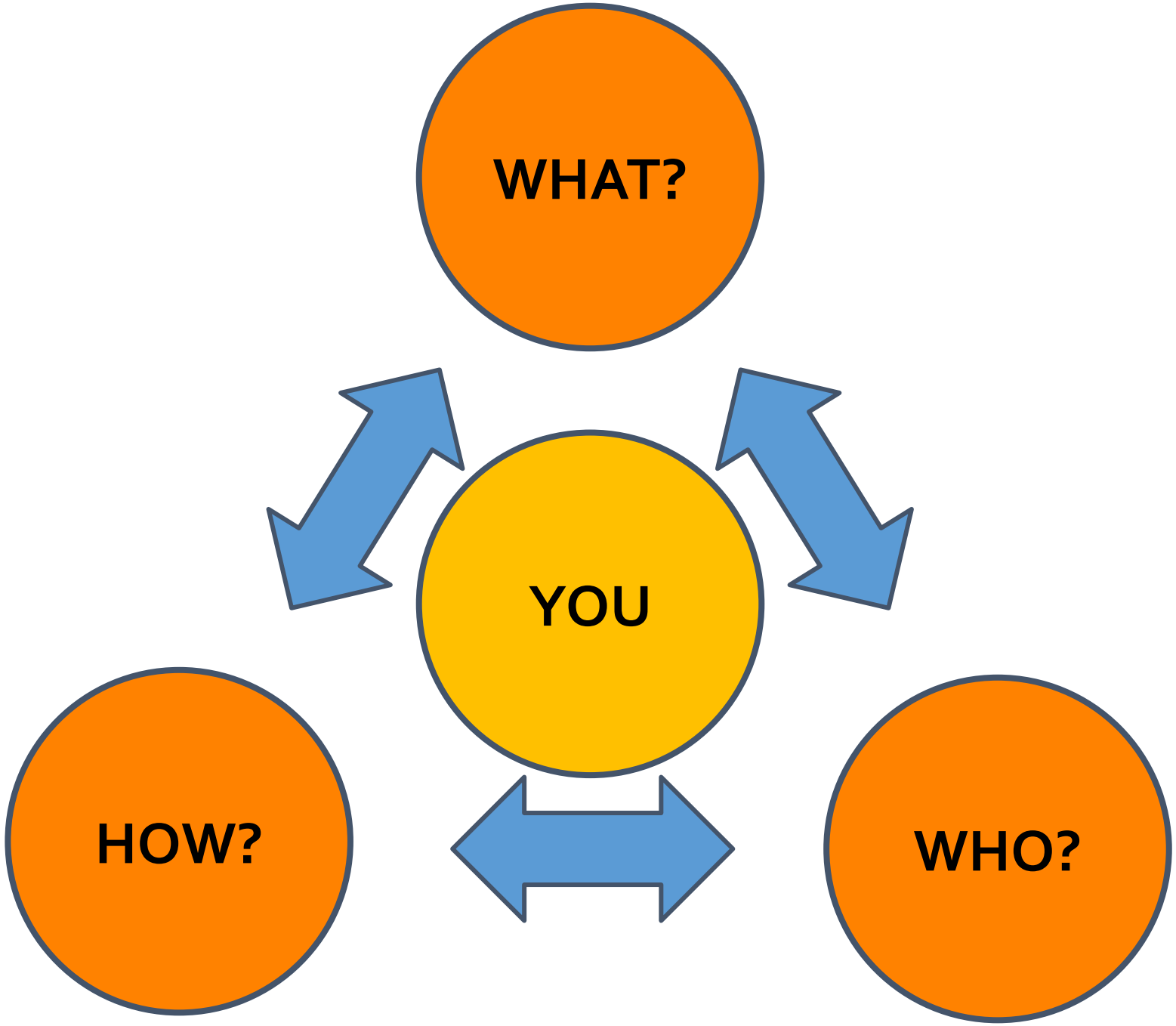
- Many tools available.
- Use AI to save time, not to do something that you could not do yourself.
- Giving talks is one of the most human skills.

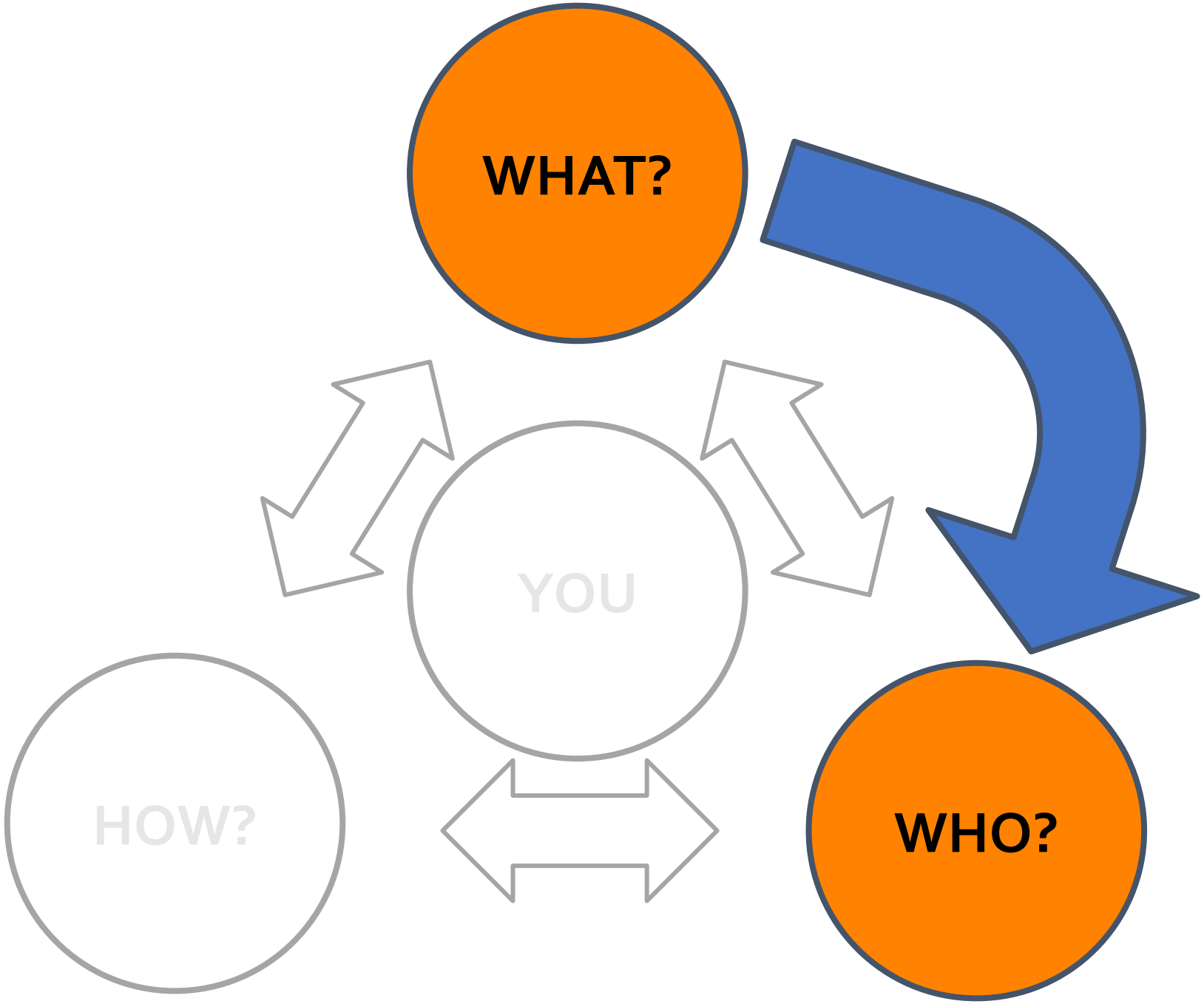
Anatomy of a talk






WHAT?
HOW?
WHO?


WHAT?
YOU
HOW?
WHO?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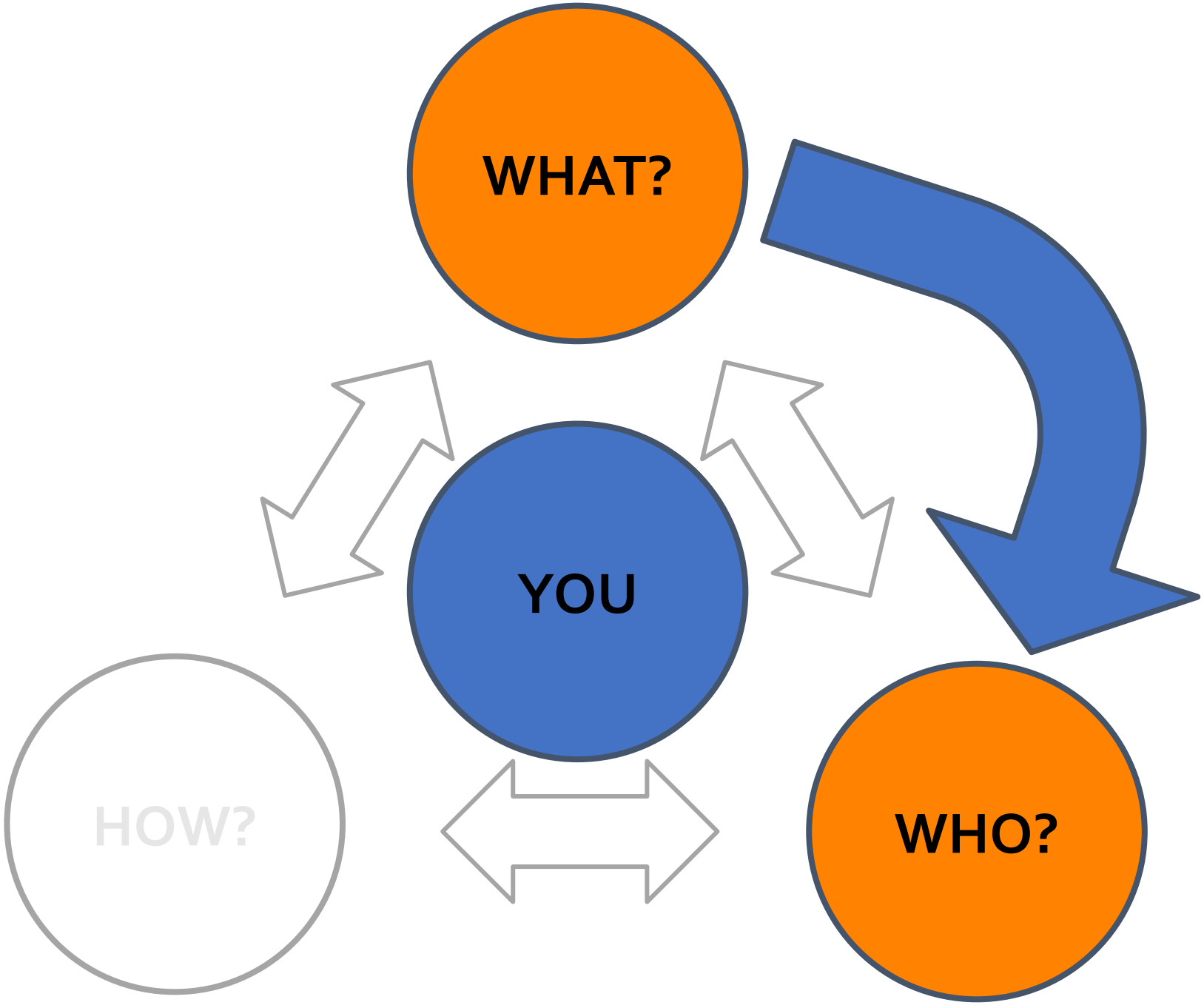

WHAT?
YOU
HOW?
WHO?



Think of giving a talk as telling a story.



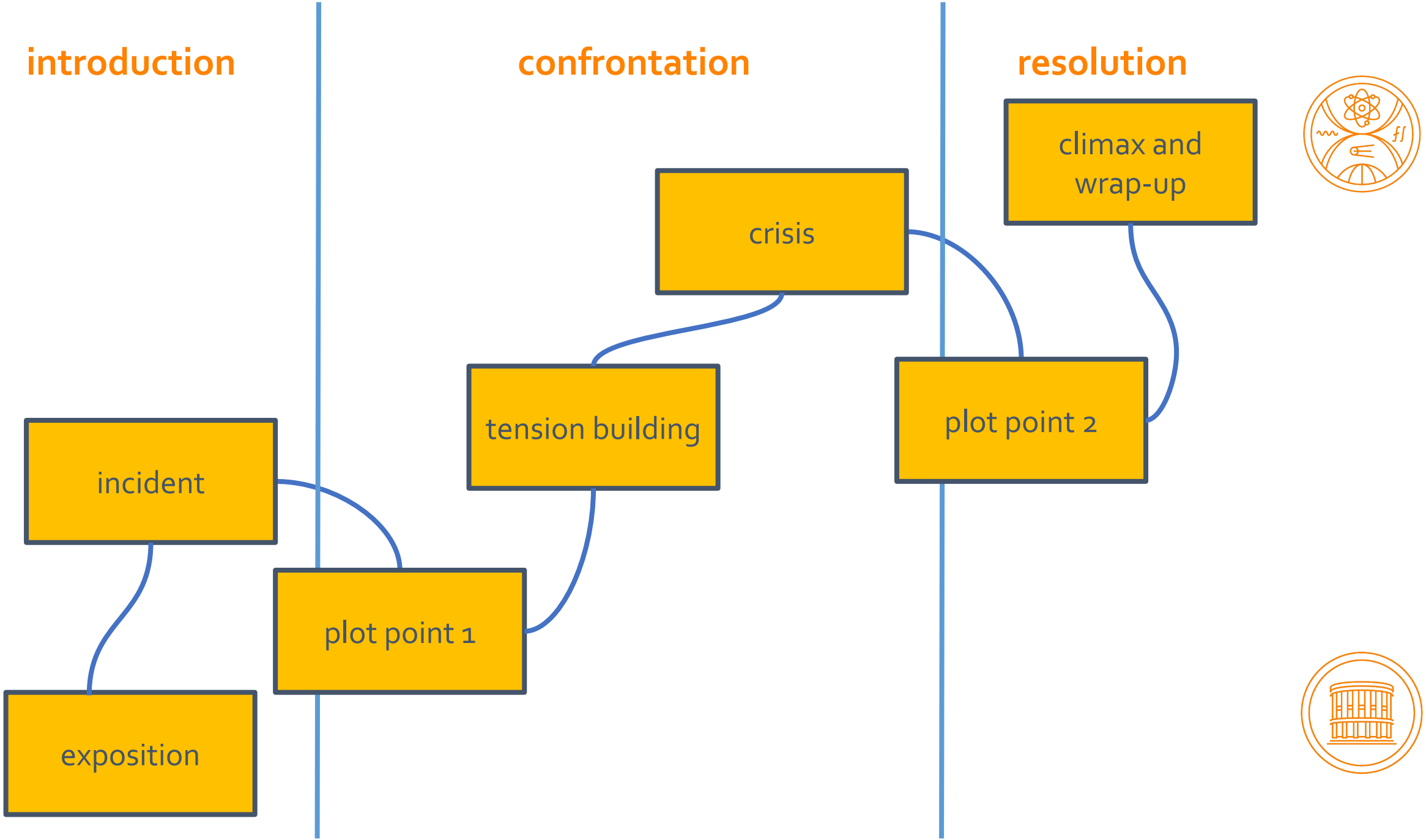
introduction

confrontation

resolution






introduction
confrontation
resolution
climax and wrap-up
crisis
tension building
plot point 2
incident
plot point 1
exposition

introduction

what?

why?

confrontation

thought 1

idea 1.1

idea 1.2

idea 1.3

thought 2

idea 2.1

idea 2.2

idea 2.3

thought 3

idea 3.1

idea 3.2

idea 3.3

resolution

what!

outlook?





Think of giving a talk as telling a story.

And every good story carries a moral and has a lesson to teach.





Advice





There is no universal way to make your presentation great.

There are many universal ways to make your presentation suck.

General advice

General advice

Practice makes perfect.

Nothing new on a race day.

General advice

Learn from your mistakes (and successes).

Learn from mistakes (and successes) of others.

General advice

Never recycle old talks.

Matrix ensembles from fuzzy physics

Department of theoretical physics seminar, FMFI UK Bratislava, October 2025

slides

Matrix ensembles from fuzzy physics

Cost Action CaLISTA General Meeting 2025, Corfu Summer Institute 2025, Greece, September 2025

slides

Matrix ensembles from fuzzy physics

Matrix Membranes and Emergent Spacetime, 85th Aniversary Workshop, Dublin, Ireland, Jun 2025

slides

General advice



Never recycle old talks.

Find your own style.



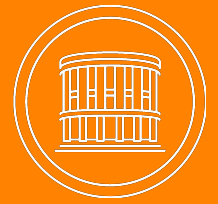
General advice

Always prepare your talk well.

It is important to nail the important talks.

Preparation





Preparation

The less time you have, the more important the preparation is.

Make sure you have a good idea about what you want to say.

What are the key points and key thoughts?

Preparation

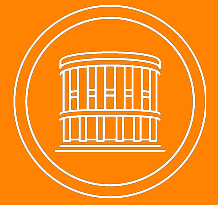
If you need to, write your text word for word.

Memorize the first couple of minutes …

… as well as the last couple of minutes.

Time management





Time management

Never, ever, under any circumstances go over your time.

Time management

Beware of lengthy introductions.

Follow your time yourself.

If you are behind, do not go faster. Leave things out.

Time management



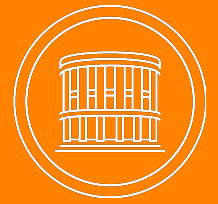
Do not go deep into technical details.

Unless that is the point you want to get across.



Execution





Execution



Come early, make yourself at home.

PDF is king.



Execution

Thank for the invitation / opportunity / space.

Joke to start with???

Execution



Get something to drink. Be well rested.

Laser pointers are tricky.

Stand close to the screen / blackboard.



Execution

- Make sure you talk loud enough, clearly and it is easy to understand you.
- Speak passionately and be excited!
- Do not shoegaze.

Execution

- Make sure you talk loud enough, clearly and it is easy to understand you.
- Speak passionately and be excited!
- Do not shoegaze.

If something from this does not come naturally, you need to lear it at a good-enough level.

Presentations

Blackboard vs. slides vs. flipchart

To truly teach → chalk blackboard.

To get an idea across quicly → slides.

An improvised setup for a small group → flipchart.

LaTeX vs. PowerPoint



LaTeX clearly better for a lot of math.

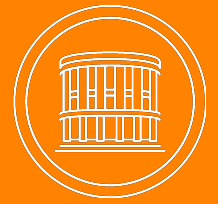
PowerPoint is faster and easier to handle images.

Good to know as many tools as possible.



Slides





Slides

Don't put too much text on a slide. It's tempting. You don't have to remember what you wanted to say. If it is difficult to understand you, everyone will see what you want to say. The slides act as notes for the future. But people don't listen to you, they read what you've written and you've basically just put yourself in the role of clicking through slides.





Slides

One thought per slide.

No mistakes.

Slides

Do not go back and forth in your slides. Repeat.

Structure in the slides can be helpful.

Slides



Formulas, graphs, images need to be clear.

Describe pictures and stuff in the pictures.

No extravagant graphical designs.



Take home message

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- Giving talks is a skill, which can be worked on.
- Think of giving a talk as telling a story.
- There is no universal way to make your presentation great. There are many universal ways to make your presentation suck.

Seminar BINGO!

To play, simply print out this bingo sheet and attend a departmental seminar.

Mark over each square that occurs throughout the course of the lecture.

The first one to form a straight line (or all four corners) must yell out BINGO!! to win!



SEMINAR BINGO

Speaker bashes previous work	Repeated use of "um…"	Speaker sucks up to host professor	Host Professor falls asleep	Speaker wastes 5 minutes explaining outline
Laptop malfunction	Work ties in to Cancer/HIV or War on Terror	"…et al."	You're the only one in your lab that bothered to show up	Blatant typo
Entire slide filled with equations	"The data *clearly* shows…"	FREE Speaker runs out of time	Use of Powerpoint template with blue background	References Advisor (past or present)
There's a Grad Student wearing same clothes as yesterday	Bitter Post-doc asks question	"That's an interesting question"	"Beyond the scope of this work"	Master's student bobs head fighting sleep
Speaker forgets to thank collaborators	Cell phone goes off	You've no idea what's going on	"Future work will…"	Results conveniently show improvement

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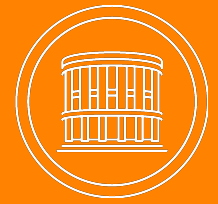
Thanks for your attention!









What lies ahead?

- Theory.
- Practice:
  -

Practice









introduction

what?

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confrontation

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https://drive.google.com/file/d/0B-ubV8IzrWrpeWtfWW1fWFV3SEE/view?usp=sharing&resourcekey=0-BWDysj7KppwuqDtbRbfbEg

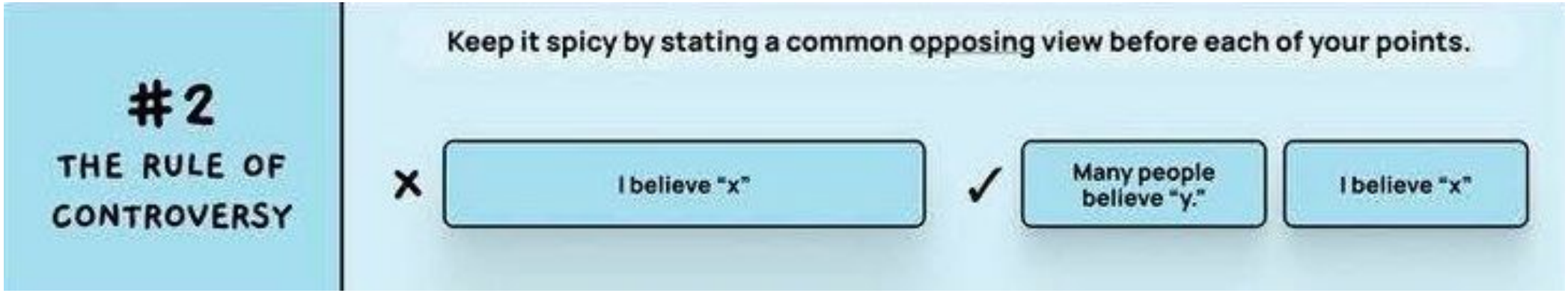
this talk was 60 minutes long, aimed at my 2nd year PhD peers at a student seminar. the goal was to present a topic that went beyond the main syllabus of a particle physics course

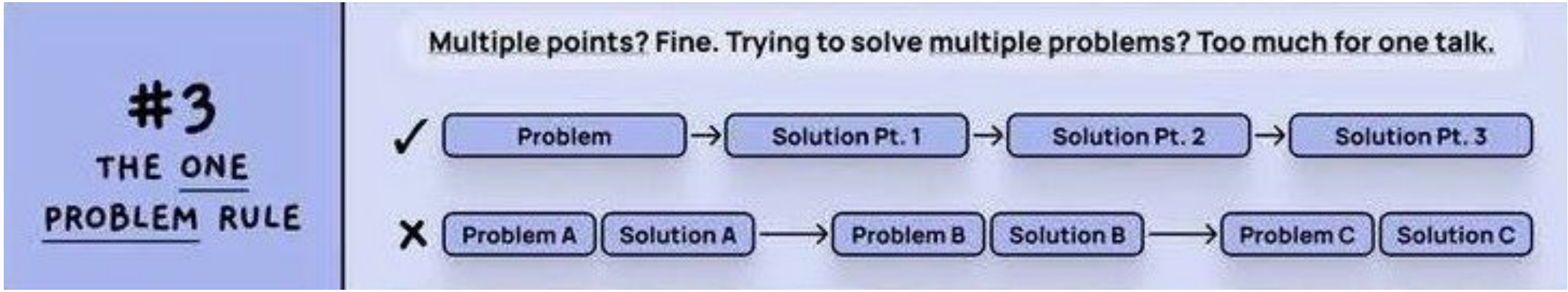




5 Rules to Keep People Engaged During Your Talk


#1
THE RULE OF ABSTRACTION
Structure your content so that each section moves from abstract to concrete.
✓
Abstract Concepts
Analogies, Metaphors
Stories, Examples
Action Steps
✗
Action Steps
Analogies, Metaphors
Abstract Concepts
Stories Examples


#2
THE RULE OF CONTROVERSY
Keep it spicy by stating a common opposing view before each of your points.
✗
I believe "x"
✓
Many people believe "y."
I believe "x"


#3
THE ONE
PROBLEM RULE
Multiple points? Fine. Trying to solve multiple problems? Too much for one talk.
✓
Problem
Solution Pt. 1
Solution Pt. 2
Solution Pt. 3
✗
Problem A
Solution A
Problem B
Solution B
Problem C
Solution C


#4
THE RULE
OF SUSPENSE
Don't reveal your points up front. Create suspense by sharing one at at time.
"I have three ideas to share. They are...
Point 1
Point 2
Point 3
Don't share these until you get there
"I have three ideas to share. The first is...
Point 1
Point 2?
Point 3?


#5
THE 2-MINUTE RULE
Change up the kind of content you're using every two minutes.
90 seconds
Story
1 min
Meme
5 min
Anecdote
1min
Chart
You will lose people here
2 min
Chart
2 min
Story
1 min
Meme
2 min
Anecdote
1 min
Story
They'll stay engaged this entire time.