

How to write a good poster and prepare an effective talk: advices and suggestions

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Consiglio Nazionale

delle **Ricerche**

IRSA

CNR

Corso di Scientific Writing





Myself:

Researcher @CNR-IRSA Evolutionary Ecologist, Ornithologist

PhD (Spain)

Several post docs (Italy): Milan, Palermo, Pavia

2 EOU Congresses
7 CIO Congresses
1 Iberian Ornithological Congress
2 Climate Change conferences (Migres, BOU)
5 Invited talks for wide public
6 post-graduate courses
Uncountable group presentations
Uncountable Project Presentations



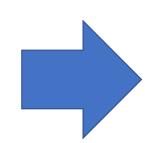
Myself:

Researcher @CNR-IRSA Evolutionary Ecology, Ornithology

PhD

Several post docs: Milan, Palermo, Pavia

- 1BSc thesis
- 2MSc thesis
- 1 PhD defense
- 2 EOU Congresses
- 7 CIO Congresses
- 1 Iberian Ornithological Congress
- 2 Climate Change conferences (Migres, BOU)
- 1 UCM young researchers conference
- 9 Invited talks for wide public
- 6 post-graduate courses
- Uncountable group presentations
- **Uncountable Project Presentations**





- 1. At least one talk every few weeks in any scientific career
- 2. Conference contributions are a fundamental activitiy
- 3. Building up of an effective professional network is crucial in the era of the precarious work

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1BSc thesis

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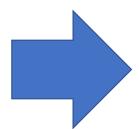
7 CIO Congresses

1 Iberian Ornithological Congress

- 2 Climate Change conferences (Migres, BOU)
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- 8 Invited talks for wide public

5 post-graduate courses

Uncountable group presentations



DEPENDING ON THE PUBLIC it is important to

introduce yourself and certify your competences at the beginning of your talk

YOUR POSTER



The hard reality.....











SYNTHESIS



SYNTHESIS

It's difficult!!!

Exercise:

- Tell your MSc thesis in 60 sec
- Tell your MSc thesis in 30 sec
- Tell your MSc thesis in a single sentence (5-10 sec)

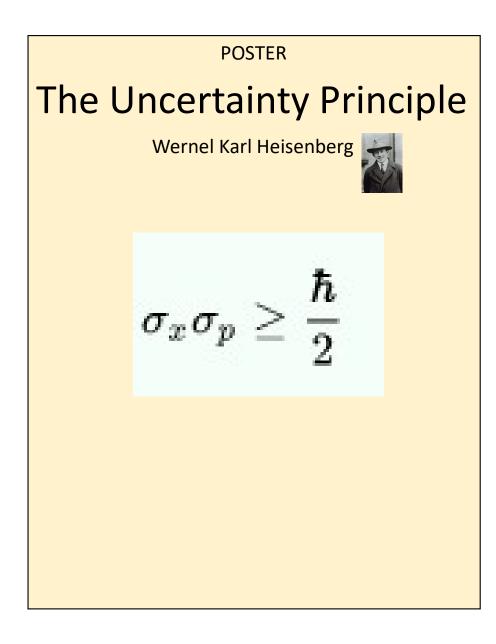
The same but written:

- With 2,000 words
- With 1,000 words
- With 250 words -> your abstract
- With a single sentence (~20 words) -> your keywords



humilty

- Your research is super interesting...mainly for you
- Everything can be expressed in a few words
- Most of the concepts could only be expressed in case you had more time/space





The Uncertainty Principle (applied to poster and oral presentations)

Too much details prevent to figure out the main outcomes!

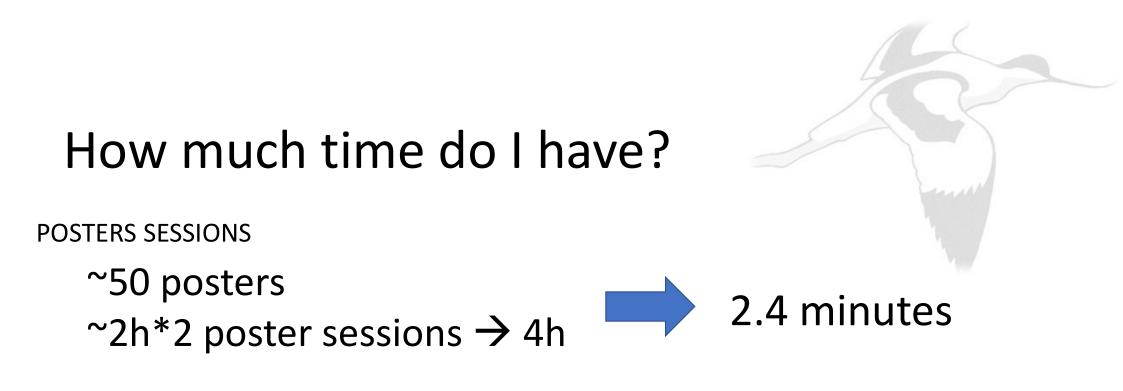
OR you talk about the detailsOR you discuss the main outcomes

tertium non datur





How much time do I have?



Must read:

https://www.methodspace.com/4-steps-to-designing-an-award-winning-poster/

The problem is that 90% of the scientific posters that you've seen at conferences and in the corridors of your university are *terrible*. I mean *very terrible*! Therefore, any ideas you might have about what a scientific poster should look like are probably, well...terrible. But it's not your fault....

Must read:

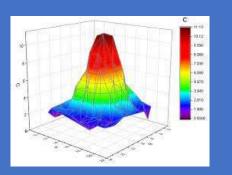
https://www.methodspace.com/4-steps-to-designing-an-award-winning-poster/

A poster is **NOT:**

A bottomless pit where you dump all of your data and technical jargoon

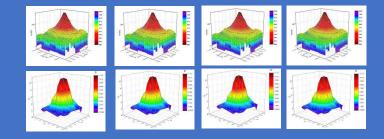
e.g.: I used nice 3D plot to show my results. I want to show it. One is probably enough. Do you REALLY need to show all of 6 plots?

MY POSTER TITLE



Reaction of the public: NICE PLOT, GOOD RESULTS, WELL DONE

MY POSTER TITLE



Reaction of the public: WHAT THE HELL IS THIS? I CAN'T READ ALL THESE GRAPHS, SKIP TO OTHER POSTER Must read:

https://www.methodspace.com/4-steps-to-designing-an-award-winning-poster/

A poster **IS**:

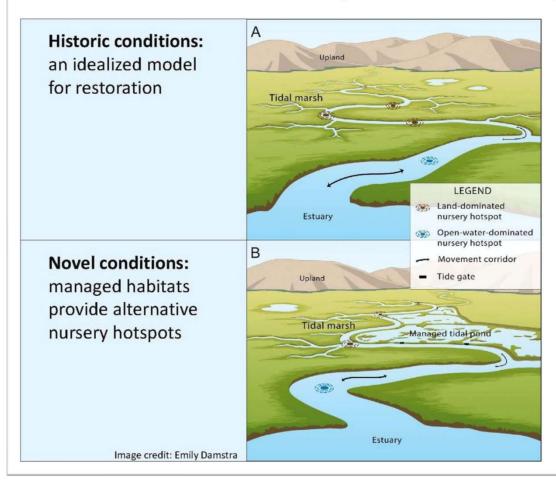
- A networking tool
- A communication tool



A poster IS <u>almost</u> a VISUAL ABSTRACT of your research

Examples of visual abstracts:

Mosaic of habitats provides nursery support for different fish



So what?

Connectivity across the system is essential for juvenile nursery support. A continuum of habitats from the estuary to uplands supports different fish species in Suisun Marsh. Effective restoration and management must incorporate this mosaic of interconnected habitats.

Colombano, D.D., A.D. Manfree, T.A. O'Rear, J.R. Durand, and P.B. Moyle. Estuarine–terrestrial habitat gradients enhance nursery function for resident and transient fishes in the San Francisco Estuary. *Marine Ecology Progress Series*. March 2020.

Examples of visual abstracts:

The importance of preferential associations and group cohesion: Constraint or optimality?

Julian C. Evans & Julie Morand-Ferron Behavioral Ecology and Sociobiology

1.

Animals must compromise between associating with preferred individuals and following group consensus.



Importance of social preferences can help infer reasons for joining a group

2.

if groups form due to constraints, social preferences may be more important than group cohesion



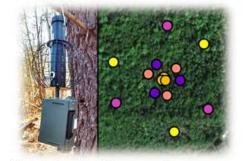
If group cohesion brings benefits, following group consensus may be more important than individuals' social preferences.

DOI: 10.1007/s00265-019-2723-7 jevansbio.wordpress.com



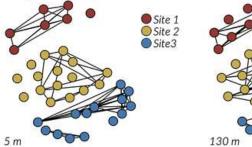


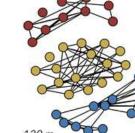
3. We examined this by looking at social network structure in relation to resource distribution,



We predicted changes in network structure as it became easier or harder to exhibit social preferences

 Network structure consistent overall –however number of strong associations significantly affected by distance, but not dominance





Can I use a big photo as background?

NO

But I have a really nice one from that cool moment of my field campaign....

NO

But it's truly a nice photo...

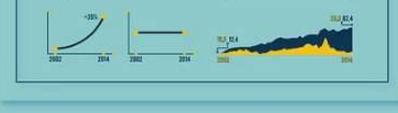
NO

Can I use a big photo as background?



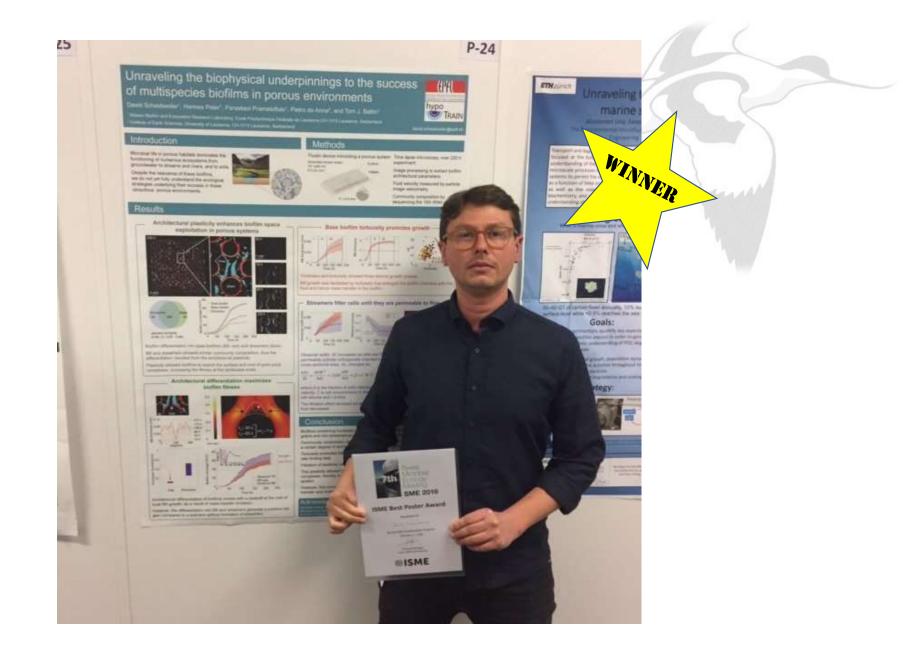


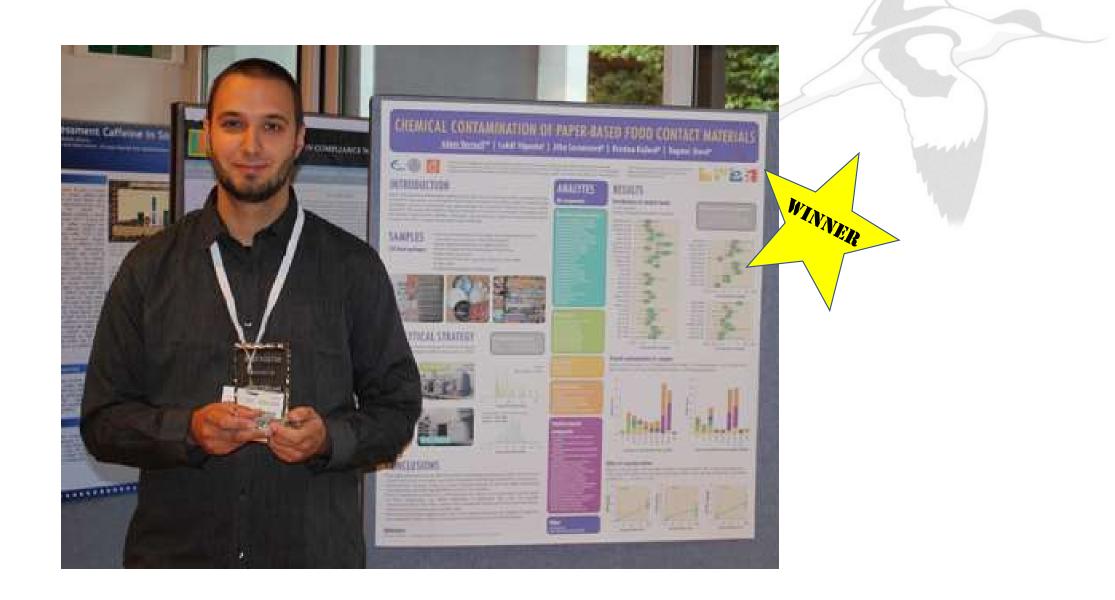
https://www.methodspace.com/4-steps-to-designing-an-award-winning-poster/ HOW TO DESIGN AN AWARD-WINNING CONFERENCE POSTER Dr. Tullio Rossi INIMATE YOUR SCIENCE **#1 SCRIPTING** #2 DESIGN YES to bullet points - NO to long paragraphs. Decide a layout before you start designing. Use sections with HEADERS. Negative space is your friend. 40% should be blank. • Maximum 250 words! Possibly <150. o Use 3 to 5 colors. Don't forget your contact information. • Use 1 accent color to draw attention. • Make sure your poster is telling a story that includes: NO to images and patterns as background. o Use 1 to 2 fonts - readable from 1 m. Methods Conclusions Background Question Results • Feel: More like an infographic less like a scientific poster. Include one large eye-grabbing visual #3 DATA Display only the essential. • Simplify graphs to make them easier to read. • Apply the color scheme to the graphs for consistency.



KEYWORDS to make a good poster:

- Synthesis
- Eye-catching
- Synthesis
- Clear and self-explaining graphs and images
- Synthesis (strictly only necessary images/graphs)
- To win the awards, add:
 - Robust and innovative scientific contents









2016



- Clear and nice images
- Clear explanation of the objectives (title)
- Use of small background photos in the graphs
- Good organization (boxing) of the info



- BY FAR too much words
- Lack of clear take-home message
- Too wide aims for a poster



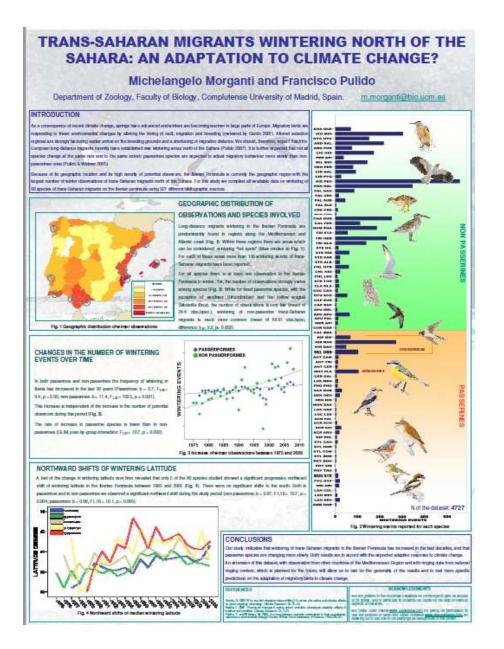
2019



- Clear and nice images
- Easy explanation of the objectives (title)
- Just a few words
- Good organization (boxing) of the info



- No clear take-home message
- Limited scientific interest





It's OLD



Clear and nice images and graphs Easy explanation of the objectives (title) Just a few words

WINNER

WINNER

Innovative findings



A bit too much words Background image Lack of a take-home message box



Lilla Lovasz, PhD student

Won the EOU (European Ornithological Union) best poster Both in 2017 and 2019 editions!





2019



- Clear and nice images and graphs
- Easy explanation of the objectives (title)

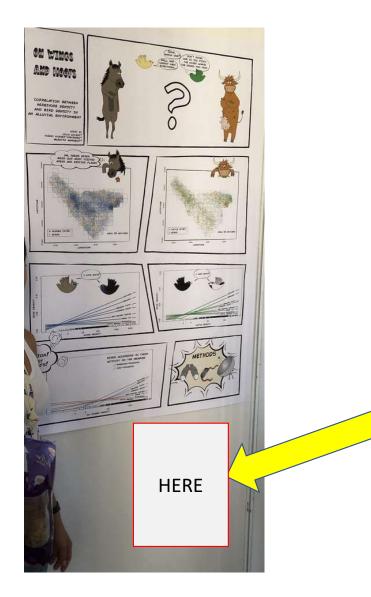
WINNER

European Ornithologist's Union Conference

- Just a few words
- Innovative findings
- Clear take-home message
- Excellent organization of the space



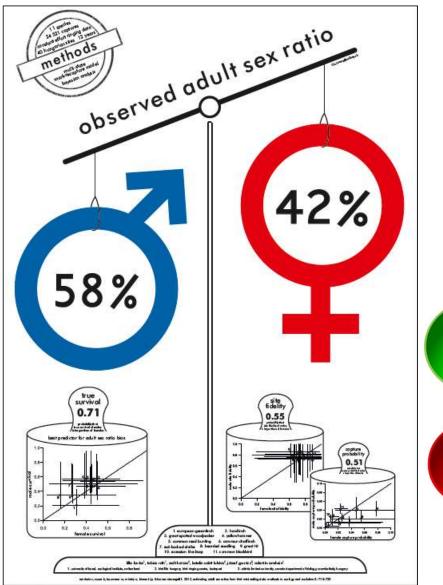
- Excessively 'comic'?





Leave A4 copies of the poster that can be collected by the conference attendees.

(Also have some copy with you!)

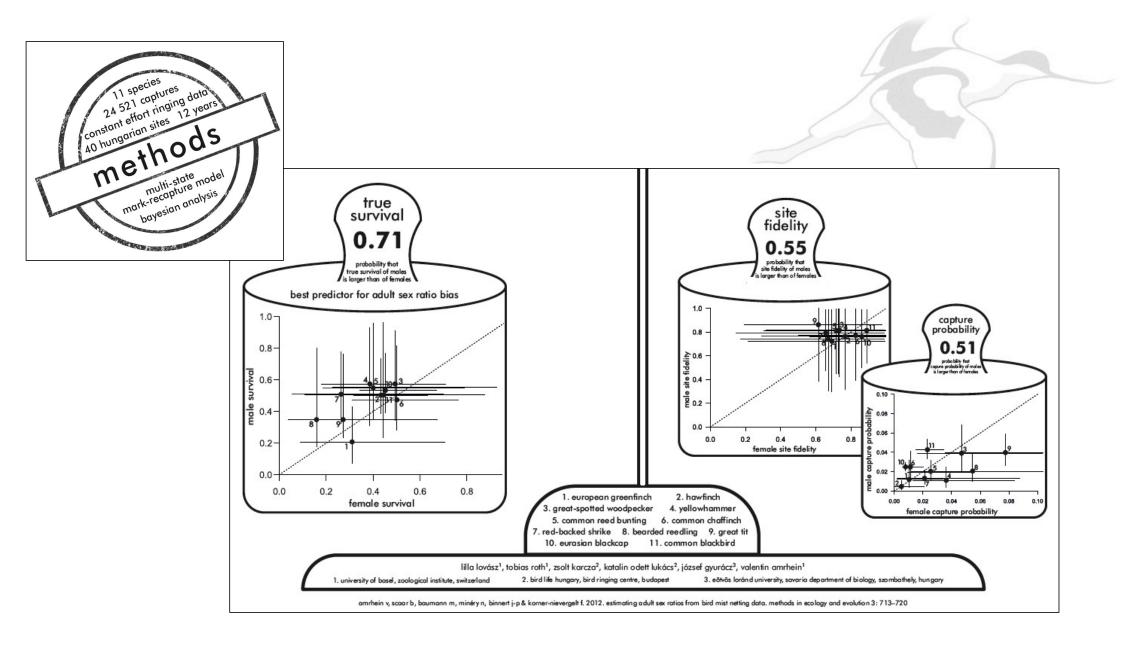


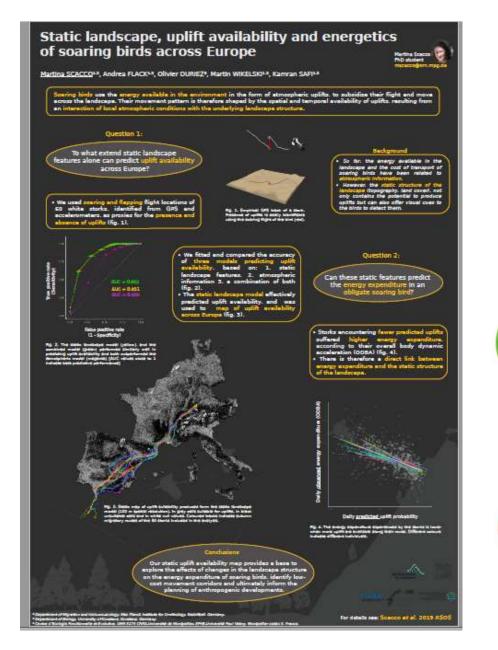


- Clear and nice images and graphs
- Just a few words
- Innovative findings
- Clear take-home message
- Very original overall design
- Excessively 'comic'?
- No clear explanation of the objectives (incomplete title)



WINNER



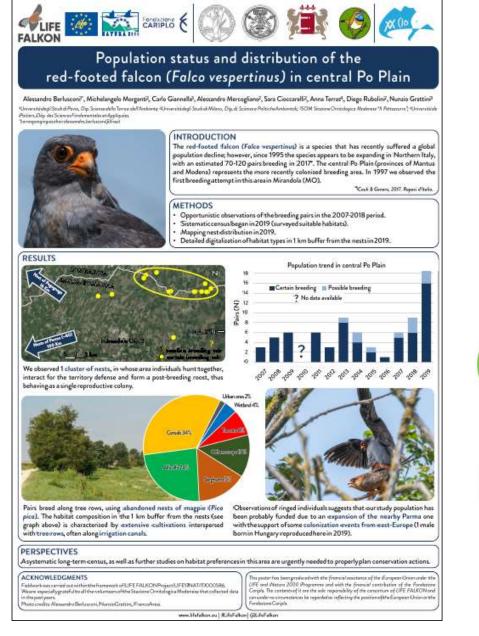


Congresso italiano ornitologia

- Clear and nice images and graphs
- Easy explanation of the objectives (title + question boxes)
- Just a few words
- Strong scientific content
- Contacts and author's photo (right upper corner)



- Excessively small font
- too much info for a poster?



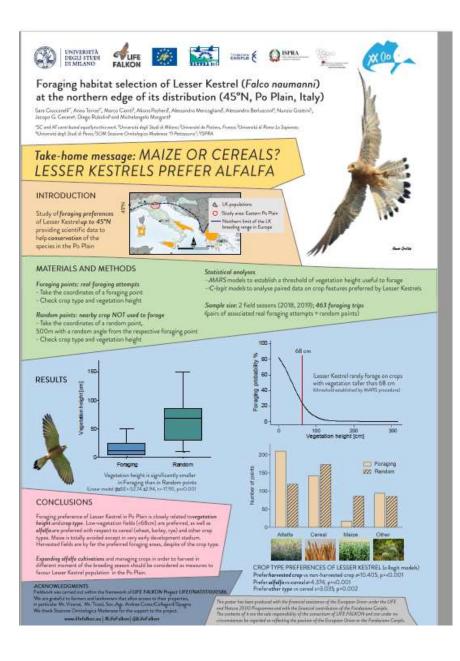
Congresso italiano ornitologia



- Clear and nice images and graphs
- Easy explanation of the objectives (title)
- Just a few words



- Lack of clear take-home message
- Explorative results



- Clear and nice images and graphs
- Easy explanation of the objectives (title)
- Innovative findings
- VERY clear take-home message (bigger than title!)

WINNER



- A bit too wordy?

Rules of thumb for effective posters:

- NO background image/photo
- 100 words ideally (no more than 250-300)
- 2-4 images/graphs
- Take-home message clearly stated
- QR code to access multimedia contents
- Your contacts clearly evidenced
- Printed A4 copies of the posters available for readers

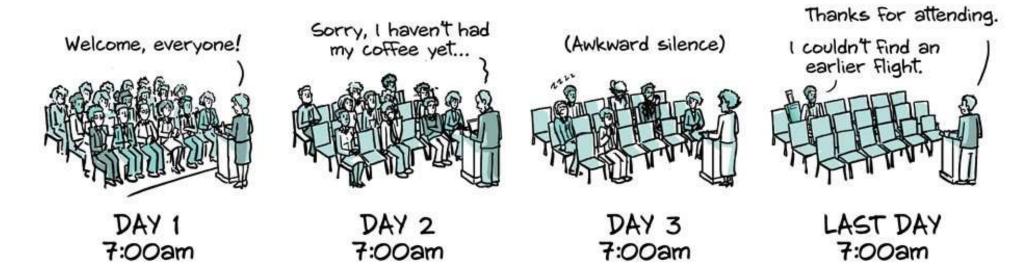




YOUR TALK



THE CONFERENCE MORNING SESSION

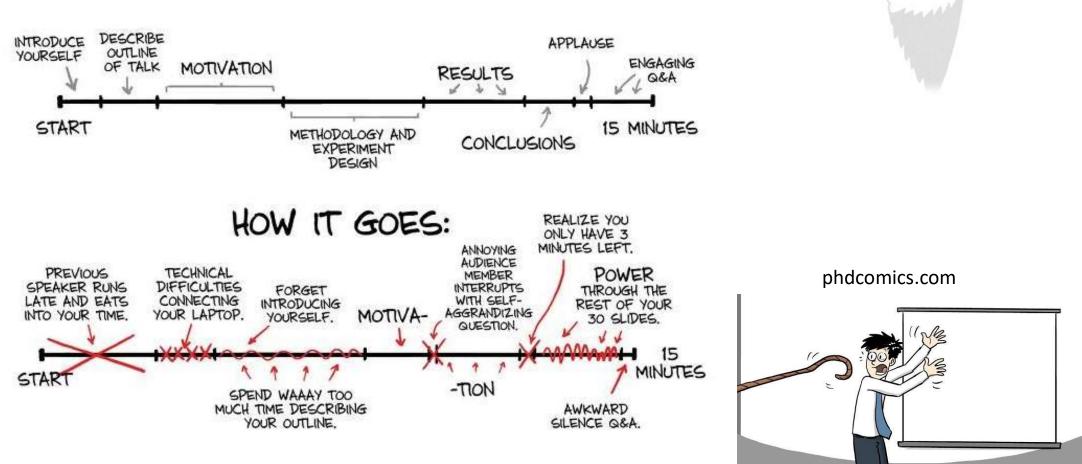


WWW. PHDCOMICS. COM

JORGE CHAM © 2017

YOUR CONFERENCE PRESENTATION

HOW YOU PLANNED IT:

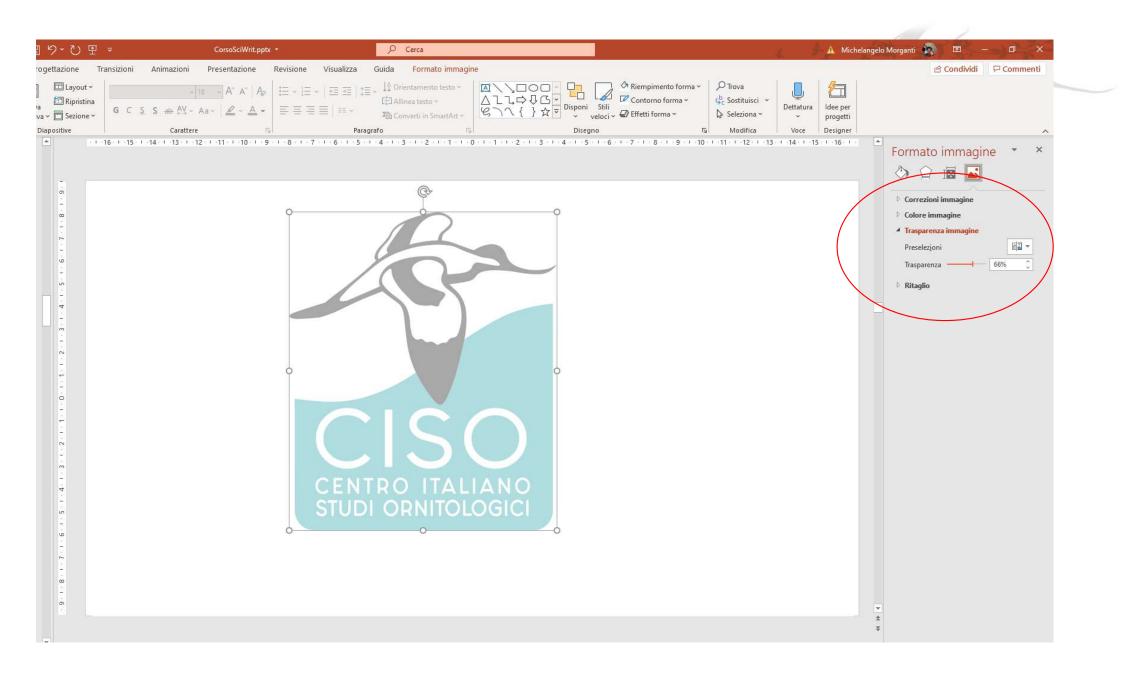


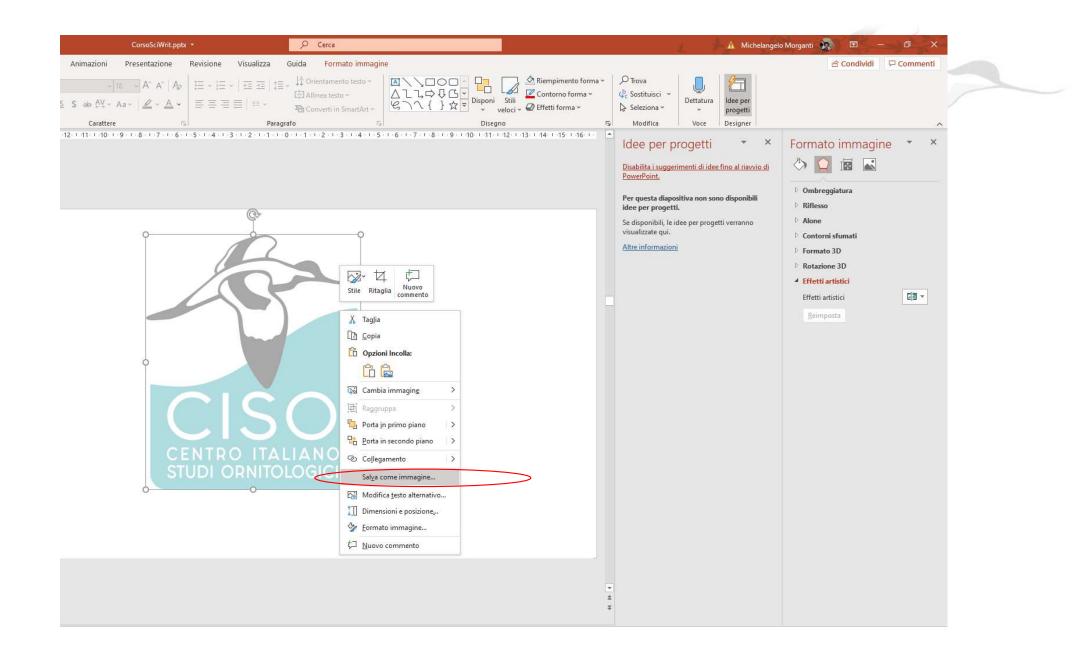


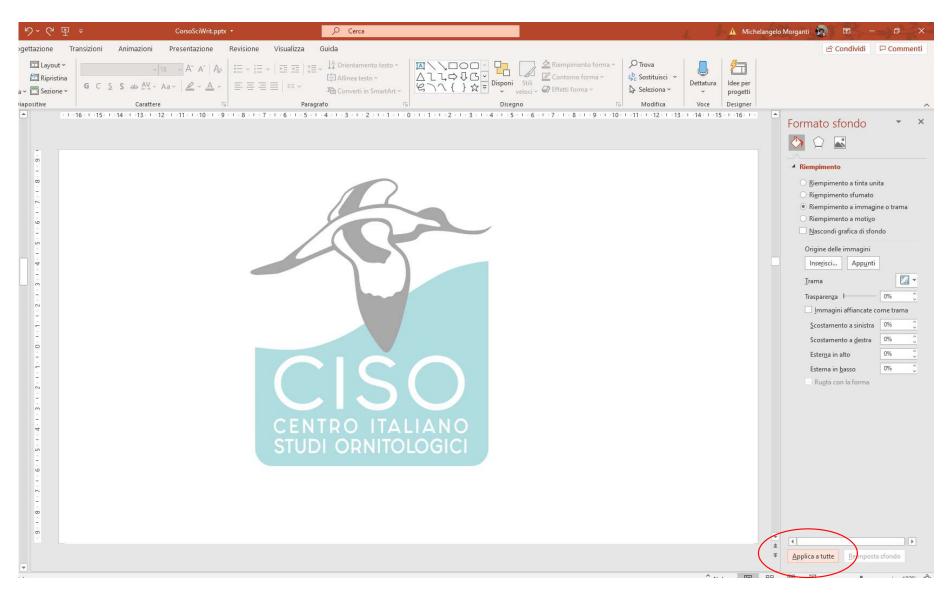


Prepare your background









Built up a light and homogeneous design for all your slides

Prepare your talk:

- How long I can talk?
 - 10, 15, 45 min?
 - Question time?
 - [stay in the assigned time is IMPORTANT!]

- Who is my audience?
 - Students? Researchers? Wide public?
- Who I have to acknowledge?
 - Some will be co-authors
 - Others must be awarded in the acknowledgments



Prepare your talk:

- Consider how to organize the information:
 - 20% Introduction
 - 20% method
 - 30% result
 - 20% discussion
 - 10% conclusions, acknowledgments
 - How much time for each slide?
 - DEPENDS



Catch the attention with the initial slide(s)

- ---

- **1 Be yourself:** people relate to and connect with authenticity.
- 2 Prepare, practice and perfect: get rid of those crutch words, like 'um' and 'you know'.
- 3 Describe what you're telling us: use vivid words to help the audience paint a picture.
- **4 Vocal variety:** change up your tone, volume and pitch to keep the audience engaged.
- **5 Study the greats:** watch what really great speakers do.
- 6 Get feedback: a practice audience can help you get the bugs out.
- 7 Appearance: if you look good, you'll feel good, which will help you give a great speech.
- **8** Pauses: they give the audience time to think, and help them engage.
- **9 Body language:** use gestures and make use of the space to help deliver your message.
- **10 Be confident:** use your face, body language and stance to own the stage.

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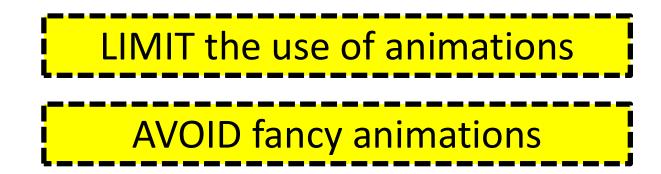
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Use a video in my talk?

- Yes
- But: if I have my PC yes, otherwise ...maybe not



Put a video in your talk can be very effective

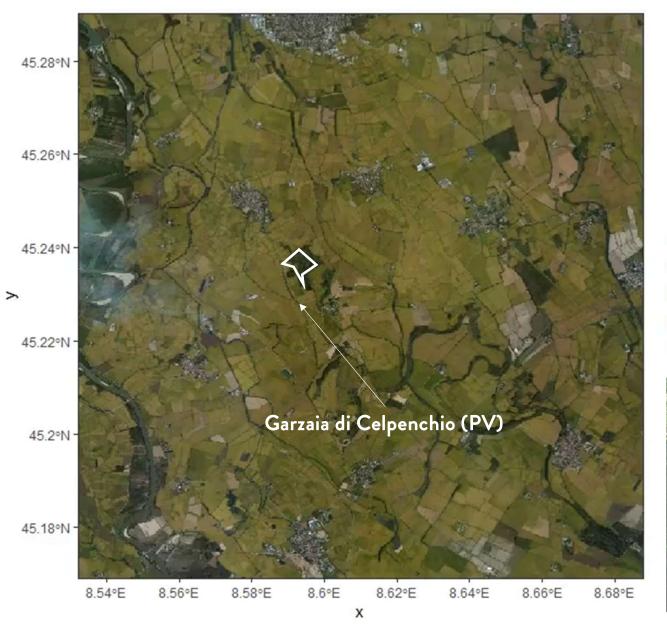
(or not!)

Example of video Useless for scientific purpose

BUT

Very catching (for the wide public!)



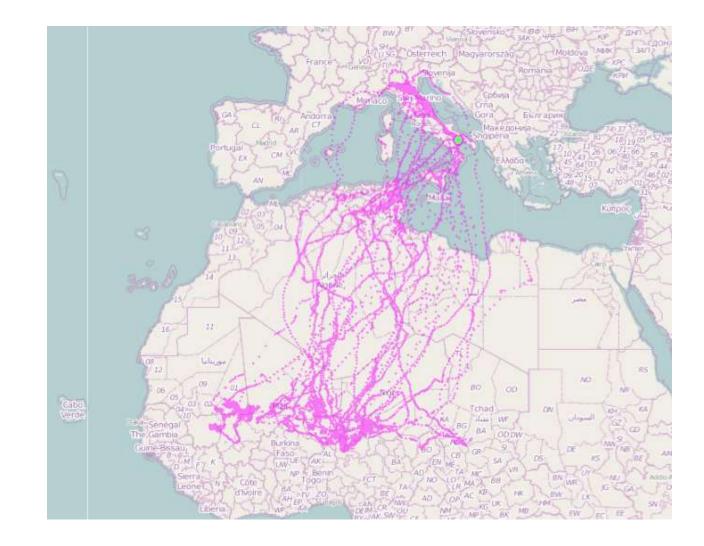


Example of video Effective for scientific purpose Poorly meaningful for wide public

Names PUR8 PUR6 PUR3 PUR4



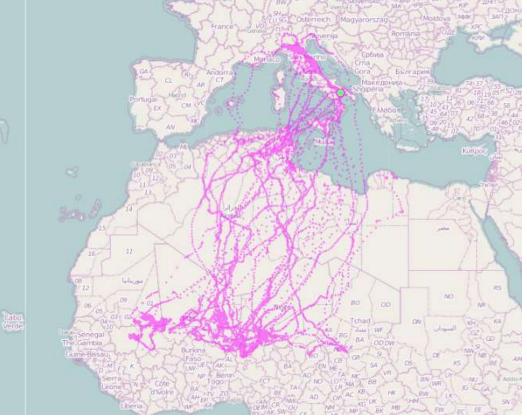
Work on your image!!!

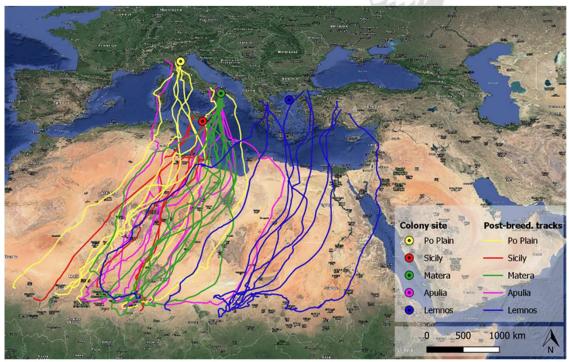


Time consuming!

<1min work

3h work





- Stress the take home message





- Some entire talks as example:
 - Jacopo G Cecere
 - Simona Imperio



Foraging tactic of a colonial raptor differs among individuals and varies according to weather conditions

Jacopo G Cecere, Delphine Ménard, Simona Imperio, Stefano Podofillini, Federico De Pascalis, Carlo Catoni, Matteo Griggio, Diego Rubolini



background

Inter-individual differences in behavioural phenotypes, that are consistent over time and across environmental contexts, have been frequently documented in animals

Consistent inter-individual differences in behavioural phenotypes may entail differences in energy efficiency and expenditure, with different fitness payoffs

In **colonial-breeding species**, inter-individual differences in foraging behaviour may evolve to reduce resource use overlap among conspecifics exploiting shared foraging areas

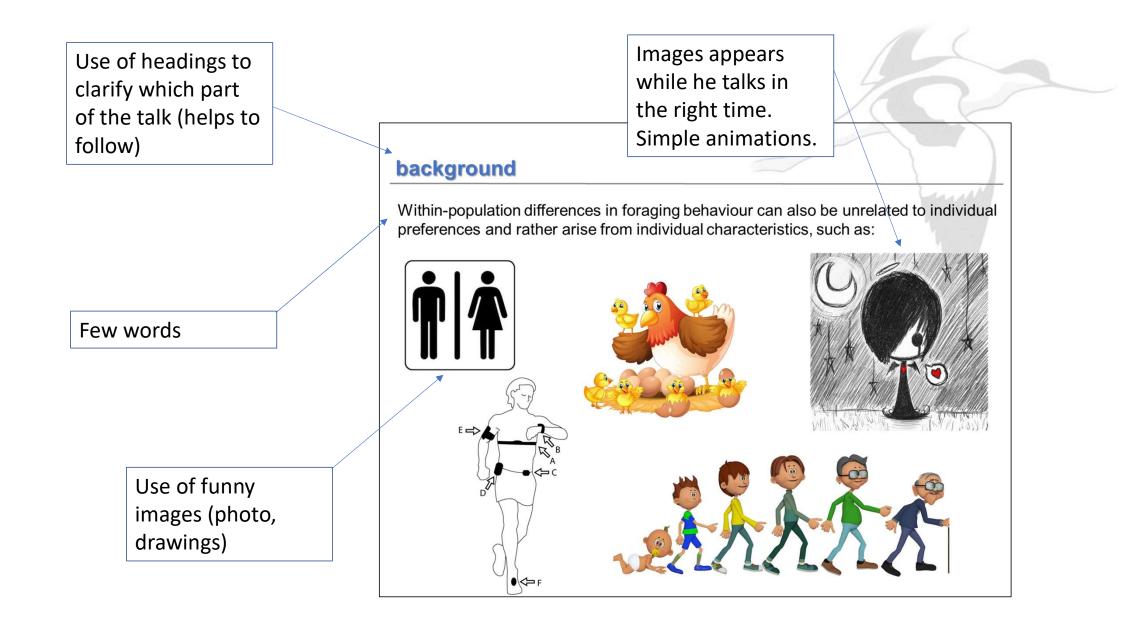


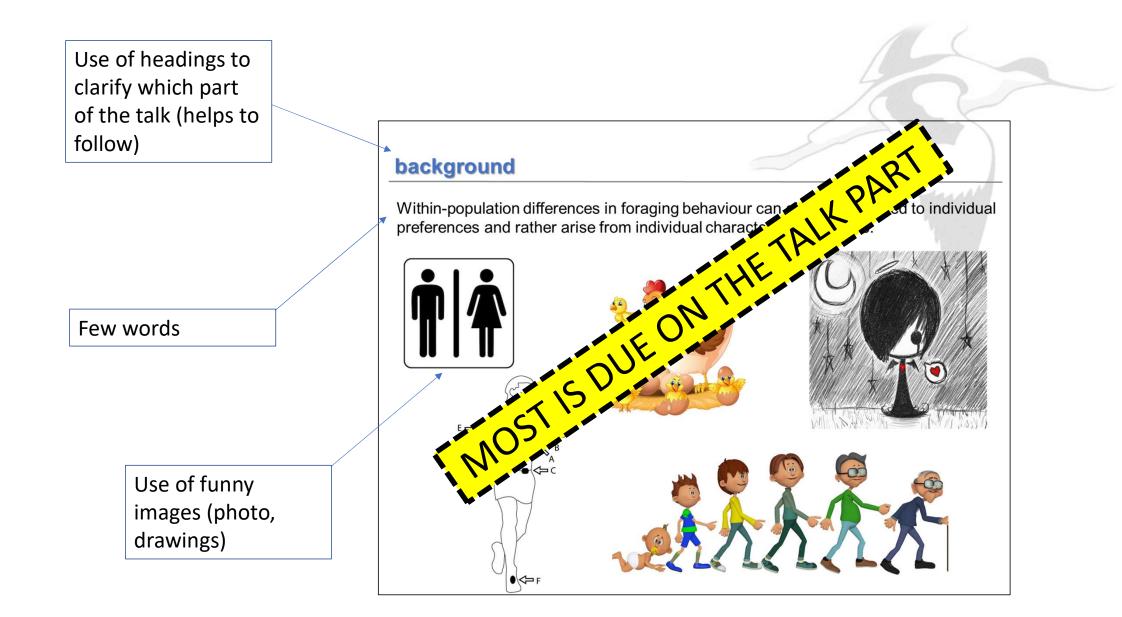
In northern gannet, the analysis of both food boluses and blood isotopes, combined with the analysis of at-sea foraging behaviour, has uncovered individual differences in foraging tactics, with some birds exploiting consistently and more frequently than others fishing vessels discards (Votier et al. 2010)

background

Within-population differences in foraging behaviour can also be unrelated to individual preferences and rather arise from individual characteristics, such as:















Istituto Nazionale per la Fauna Selvatica



Imperio S., Focardi S., Ronchi F. & De Marinis A.

The evolution of leks: the point of view of female fallow deer (Dama dama)

Lek: "Any aggregation of males that females visit only for the purpose of mating" (Bradbury, 1981)

Criteria:

The seal of the seal

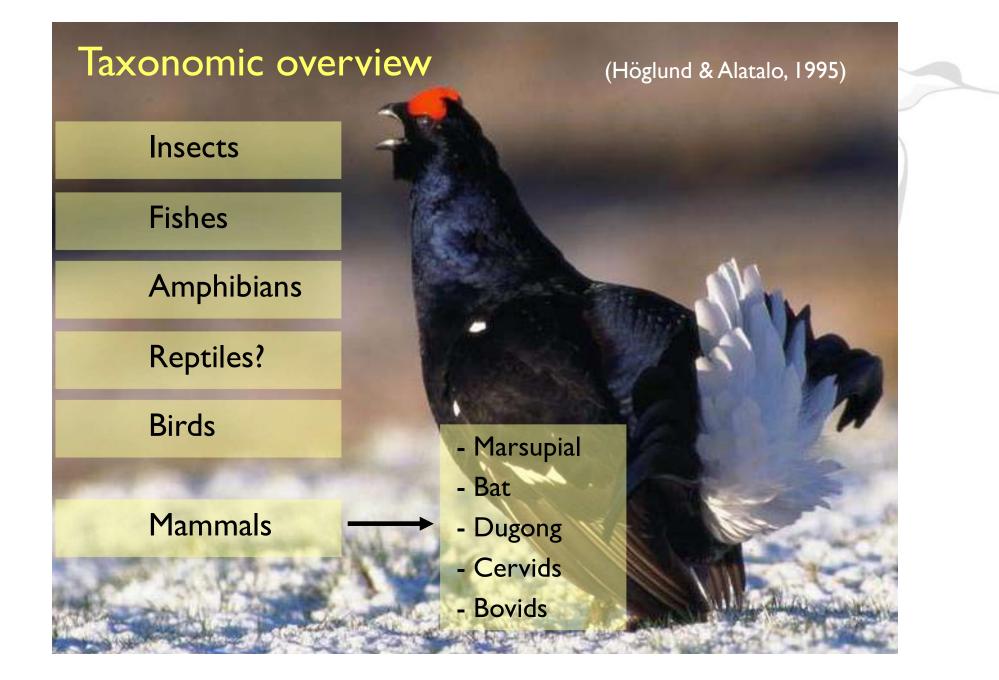
I. No paternal care

2. Arena (where most of the mating occurs)

3. No resource defended

4. Opportunity to select

a mate

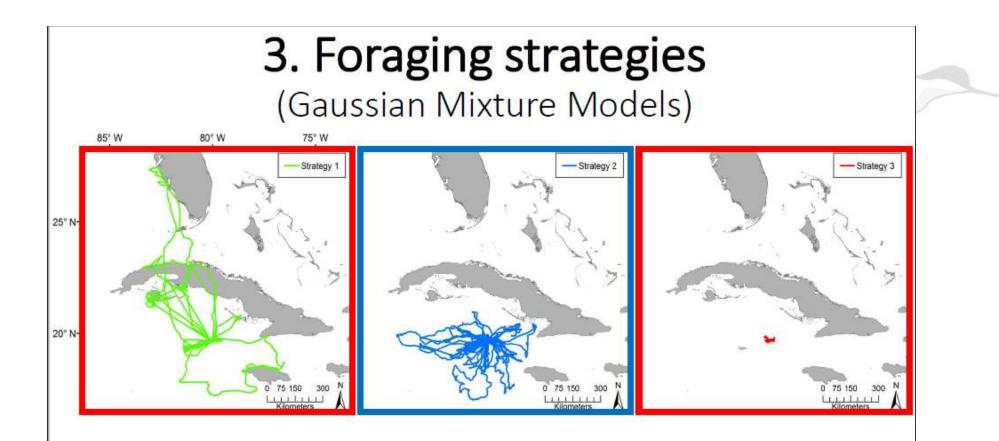






«may be one of only a few bird species able to ride out a storm »

Hp1: Avoidance
Hp2: Reduced activity levels



Coastal and pelagic strategies

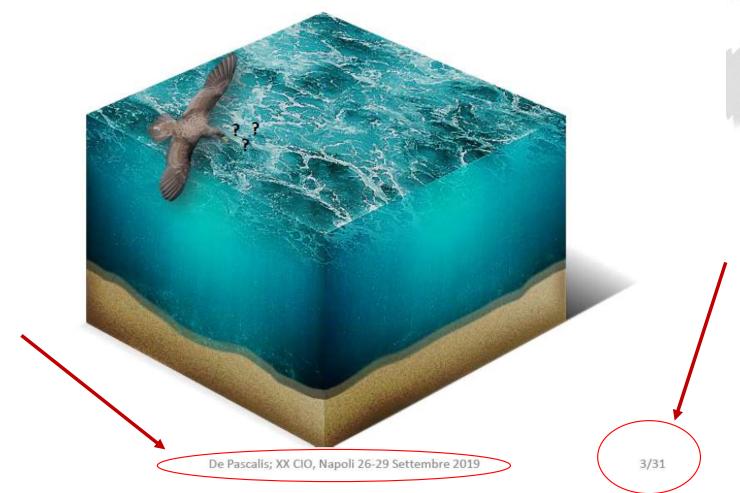
Seabirds: dynamic, homogeneous, 3D environment



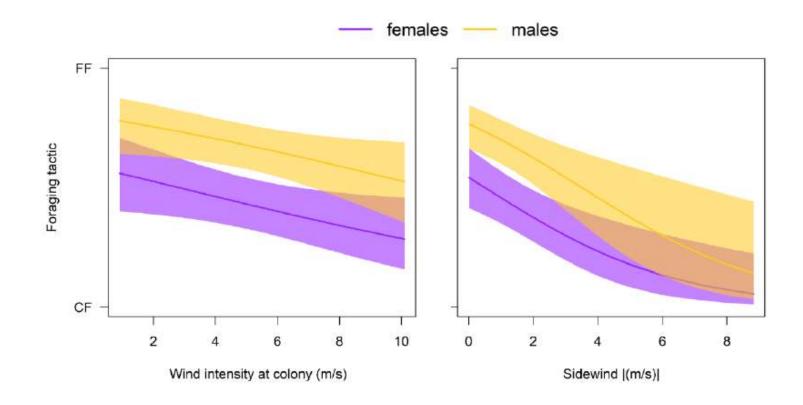
De Pascalis; XX CIO, Napoli 26-29 Settembre 2019

3/31

Seabirds: dynamic, homogeneous, 3D environment



And when wind intensity increases...



De Pascalis, XXIX Congresso SItE, Ferrara 10-12 Settembre 2019



2019

Best talk at the XXCIO, Naples, Sept 2019

Differential role of <u>static landscape</u> in providing low-cost flight opportunities in <u>two soaring species</u>

WINNER

M. Scacco, E. Arrondo , A. Flack, J. A. Donázar, O. Duriez, M. Wikelski, K. Safi



www.prezi.com



Prezi è un servizio basato su cloud per la realizzazione di presentazioni, che vengono realizzate su una tela virtuale. Prezi è stato ufficialmente pubblicato nel 2009 dai fondatori Adam Somlai-Fischer, Peter Halacsy e Peter Arvai. Wikipedia

Tipo di sito: Servizio per creazione di presentazioni Prezi sito web: Prezi; sito web

A valid alternative to Power Point

Downsides:

- need to learn the working environment
- Pay platform



How to give a great scientific talk

How to give a great scientific talk

- **1 Be yourself:** people relate to and connect with authenticity.
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- 9 Body language: use gestures and make use of the space to help deliver your message.
- **10 Be confident:** use your face, body language and stance to own the stage.

https://www.nature.com/articles/d41586-018-07780-5

Overall, take in mind that

prepare a (good) talk is a LONG WORK



(3-4..7days?)

Prepare a (good) POSTER it's a long work too.

Overall:

For your career talks are much more evaluated than

posters and give you more visibility.











Thank you!

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Thanks to:

Jacopo G Cecere, Simona Imperio, Federico De Pascalis, Giacomo Assandri, Martina Scacco



A last trick:

- Anticipate the possible questions (you know the debilities of your work)
- Prepare a series of slides AFTER the acknowledgments to answer to the possible questions
- Leave your contacts in the last slide!