

# Welcome!



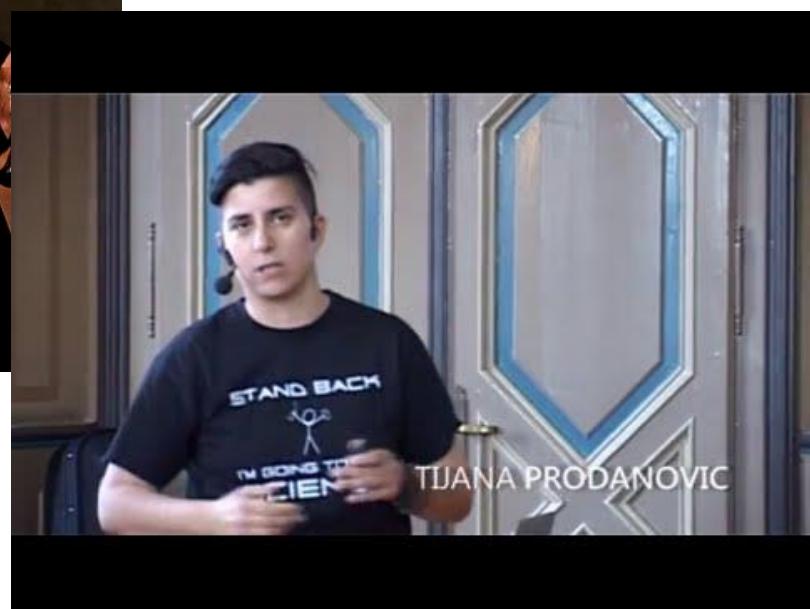
# CONNECT 4.0:





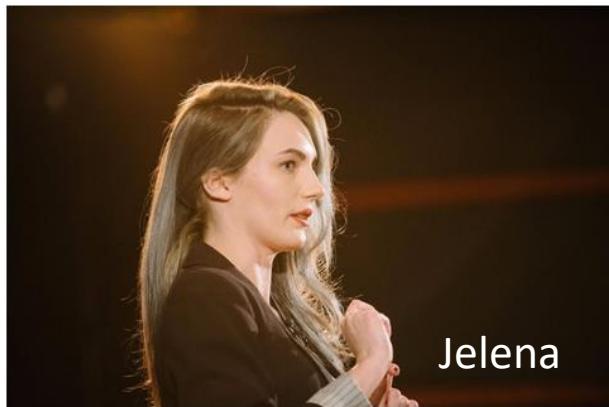
Tijana Prodanović

*University of Novi Sad*



# Your Mentors:

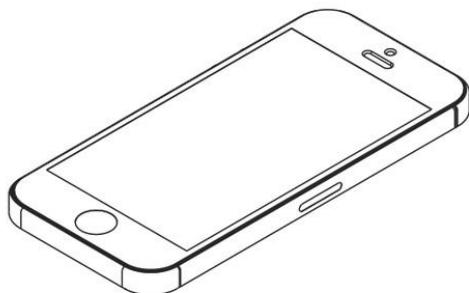
- Mirza Hadzimehmedovic, University of Tuzla
- Tijana Prodanovic, University of Novi Sad
- Jelena Kalinic, *Quantuum of Science*
- Oliver Toskovic, University of Belgrade
- Elvis Ahmetovic, University of Tuzla



# Get to Know You



Go to [www.menti.com](http://www.menti.com) and use the code **49 10 37 0**



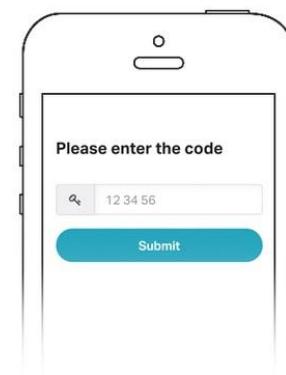
1

Grab your phone

[www.menti.com](http://www.menti.com)

2

Go to [www.menti.com](http://www.menti.com)



3

Enter the code **49 10 37 0**



# How Experienced are You in Science Communication?

# Projects

- 3 student groups, 3 mentors, 3 project topics
  - 1) Short science communication formats/video
    - Tijana, Mirza
  - 2) Written science communication/pseudoscience
    - Jelena, Oliver
  - 3) Project writing
    - Elvis

# Tasks:

- 1<sup>st</sup> :  
brain-storm today what topic(series) you want to address in your project
- 2<sup>nd</sup>:  
Present your idea tomorrow in 5 min
- 3<sup>rd</sup>:  
Create, consult, change, repeat
- 4<sup>th</sup>:  
Final presentations on Friday

# And now... Why?



# Solar Eclipse 1999, Serbia



1. za vreme delimične faze pomračenja se ne sme gledati nezaštićenim okom;
2. za posmatranje pojave pomračenja koristiti specijalne naočare sa kobalt staklim, koje imaju maksimalno zasenčenje;
3. za vreme totalne faze, koja će biti prisutna na području severno od linije koja spaja Suboticu i Kikindu, može se gledati bez korišćenja zaštite, ali tek nekoliko sekundi pošto počne ova faza, s tim da se mora prekinuti pre nego što se totalna faza završi;

## Moguće posledice

- ubrzani rad srca;
- grčenje u želudcu;
- pojačan svrab kože;
- nagli skok krvnog pritiska;
- povećanje nivoa šećera u krvi;
- učestalo mokrenje.

4. preporučuje se građanima da spuste roletne na prozorima i da se udalje od prozora, kako se ne bi pogled nesvesno, a bez zaštitnih naočara uputio prema Suncu;
  5. ke ne mora, posebno deca i starija da izlaze iz kuće za vreme ponovni da posmatraju pojavit;
  6. posebnu odgovornost imaju roditelji i zaposleni u predškolskim ustanovama, vreme trajanja pomračenja deca treba u zatvorenom i zamraćenom prostoru;
  7. u preduzećima i ustanovama, proces rada organizovan po smenama, u prvoj smeni moraju sačekati osoblja iz druge smene;
  8. lica oboljeli od hroničnih bolesti i jatriseki bolesnici treba strogo da se u datih upustava o ponašanju i reči mogu propisanu terapiju.
- Preporučuje se da se i pored zaštite, kao što je način ponašanja, u slučaju pojave ne posmatra direktno, već indirektno preko TV ekrana.



Tijana Prodanovic - [prodanvc@df.uns.ac.rs](mailto:prodanvc@df.uns.ac.rs)

CONNECT 4.0, Neum

# What is Science Communication?

- Wiki:

*presenting (talking about) science topic to non-experts*

- Broader:

*presenting (talking about) science topic to anyone*

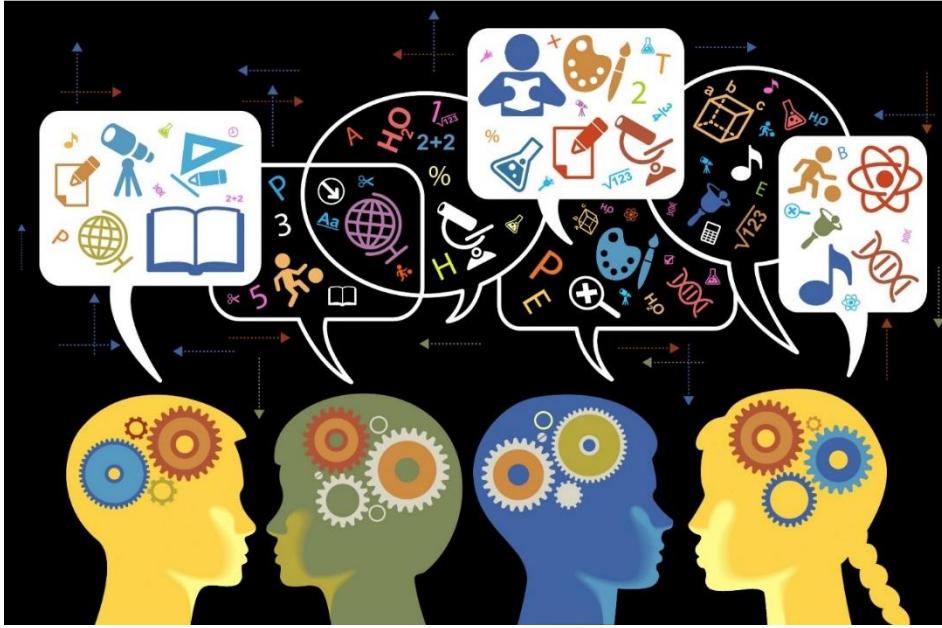
# It Matters!

- The way you communicate your idea counts!
  - Even the best ideas need marketing!
  - Even the best joke can be ruined if you tell it poorly
  - Very Important for scientists!
- 
- **Well communicated ideas get remembered!**



# Who Should Communicate?

- PRs
- Media
- Educators
- Scientists
- Students



# Information Revolution

- Development of IT sector
- Large volumes of easily access information



Search: google search

Results:

- google search
- google search history
- google search by image
- googl
- goog

**WIKIPEDIA**  
The Free Encyclopedia

Main page  
Contents  
Featured content  
Current events  
Random article  
Donate to Wikipedia  
Wikisource store  
  
Interaction  
Help  
About Wikipedia  
Community portal  
Recent changes  
Contact page



YouTube video thumbnail: THE END OF THE EARTH'S CRUST (70 000m)

9 Incredible Science Facts You Probably Didn't Learn At School

8,988,376 views

5-Minute Crafts (Published on Feb 21, 2017)

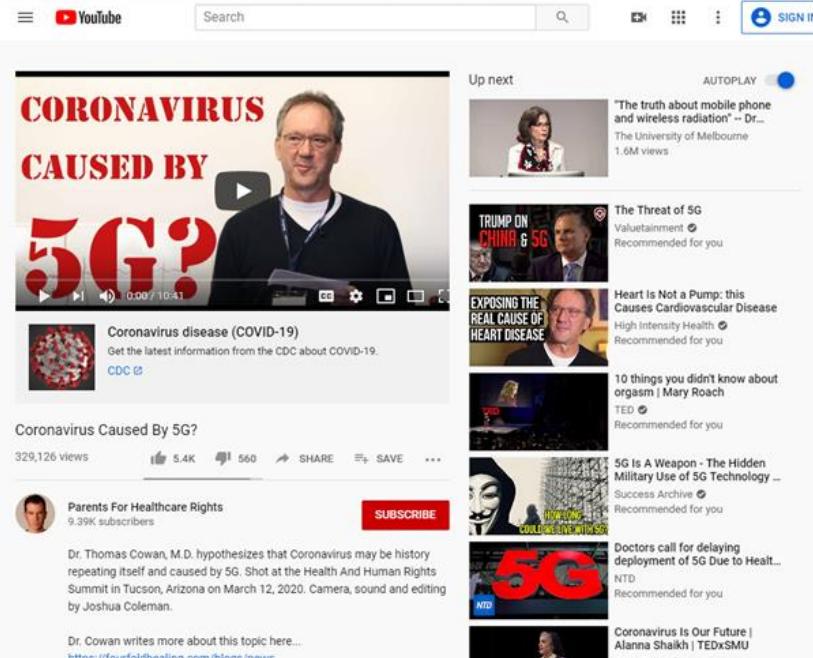
80K likes, 8K dislikes

Subscribed 2.7M subscribers

Read Edit View history Search

# Information Revolution Problems

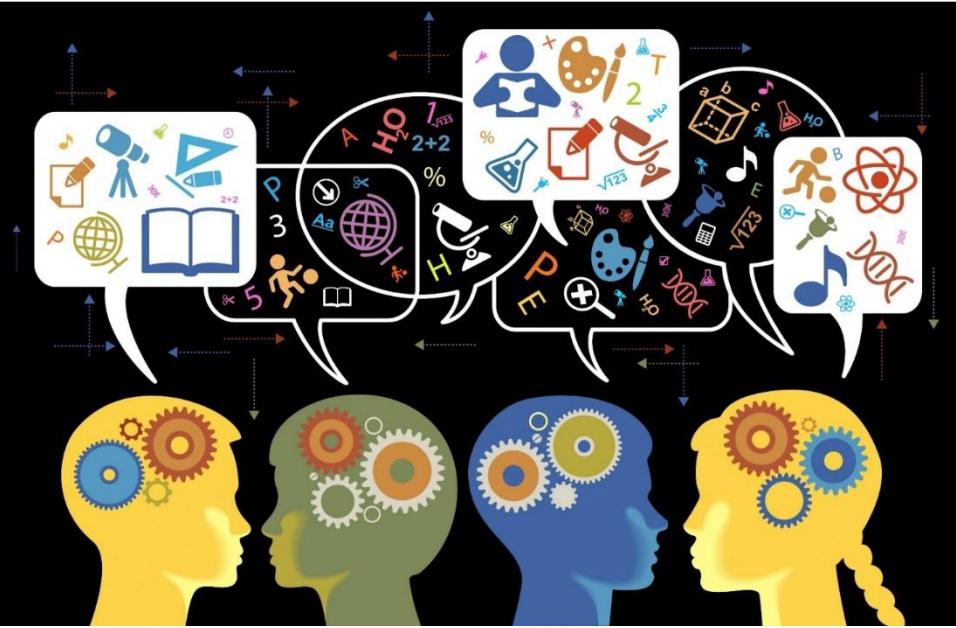
- Wrong info also easily available
- Social networks help spread them
- Confusion in general public
  - Contradiction to what is learned in school
  - New info beyond what is learned
- Critical thinking and/or background in subject
- **Infodemic!**



5G Corona is the **#truth** There is no damn virus, we all got sick at the same time they rolled out 5G. The other factor is the Chemtrail metallic dust they use to strengthen the signal and bounce it downwards.

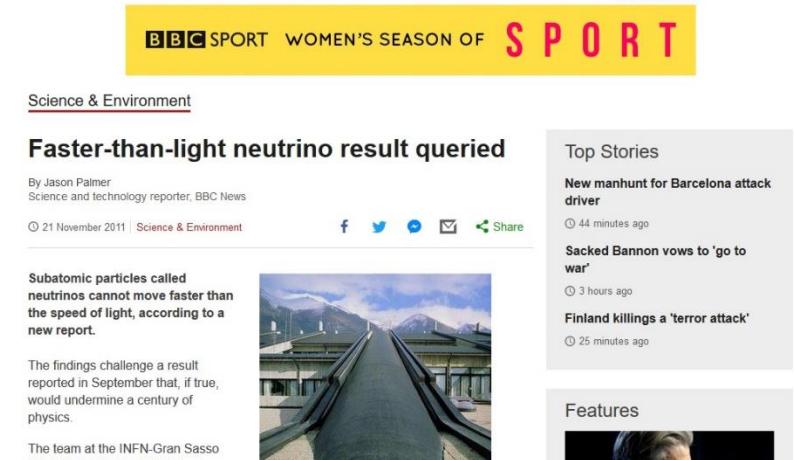
# Who Communicates?

- PRs
- Media
- Educators
- Scientists
- Students
- **Self-proclaimed experts**
- **Anyone can communicate today...**
- **We must step up!**



# Regaining Trust in Science

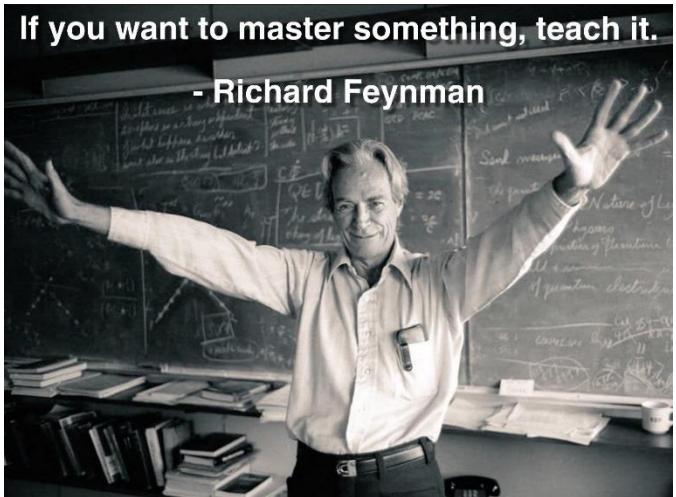
- “Old times” - was given
- Today – **must be earned!**
- Must involve **scientists**
  - Knowledge authority
  - Bring weight
- Focus on scientific method
  - Theory is not “just theory”
  - Critical thinking
  - Facts
- “Real time” science communication – talk about current news

The screenshot shows a BBC Science & Environment article titled "Faster-than-light neutrino result queried". The article is by Jason Palmer, a science and technology reporter for BBC News, and was published on November 21, 2011. It includes social sharing icons for Facebook, Twitter, and Email, and a "Share" button. The text discusses a new report challenging the claim of faster-than-light neutrinos. A photograph of a team at the INFN-Gran Sasso facility is shown. To the right, there's a sidebar for "Top Stories" and "Features".

# What's in it for You?

- Learn in the process!
- Satisfaction
- Change image of science

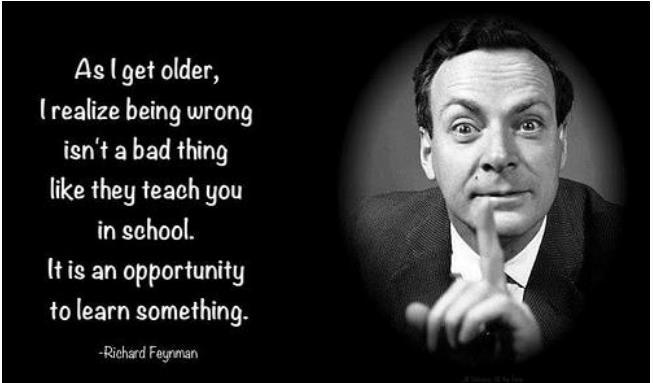
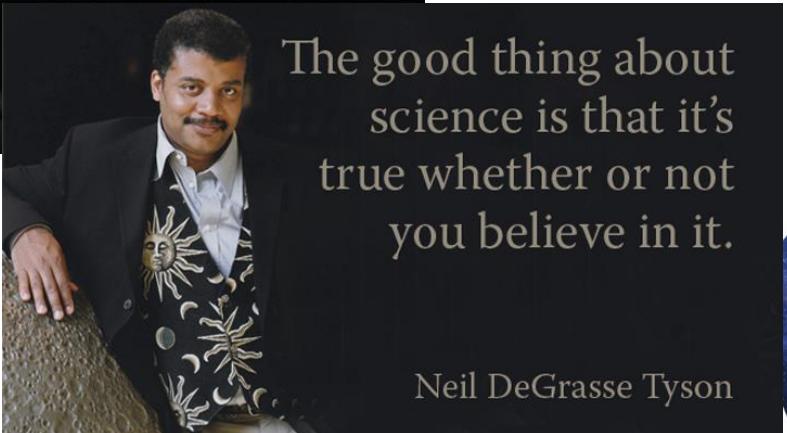
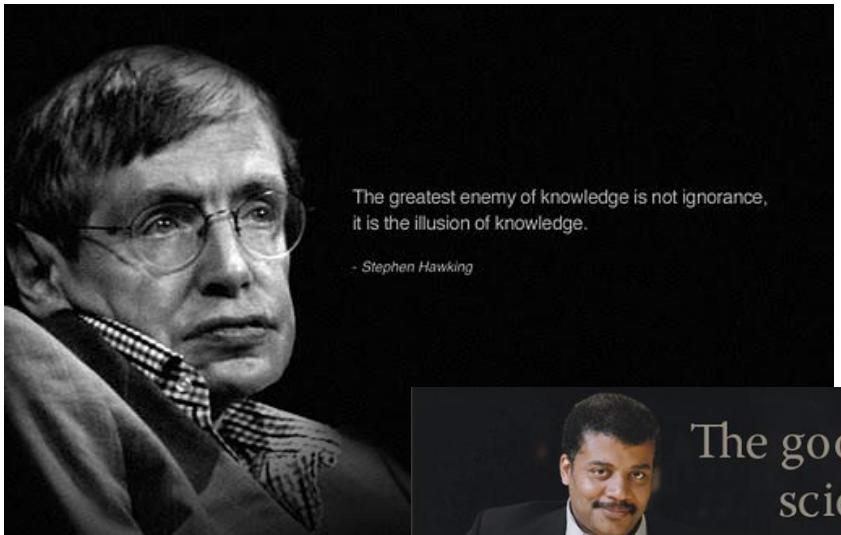


# Science Communication is a Survival Skill

- Hunting for funding
- Building an image of scientist
- Sparking an interest with the public
- Navigating/Untying difficult topics
- Finding easy answers to hard questions

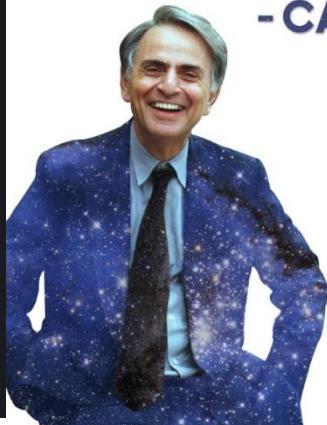


# Power of Communication



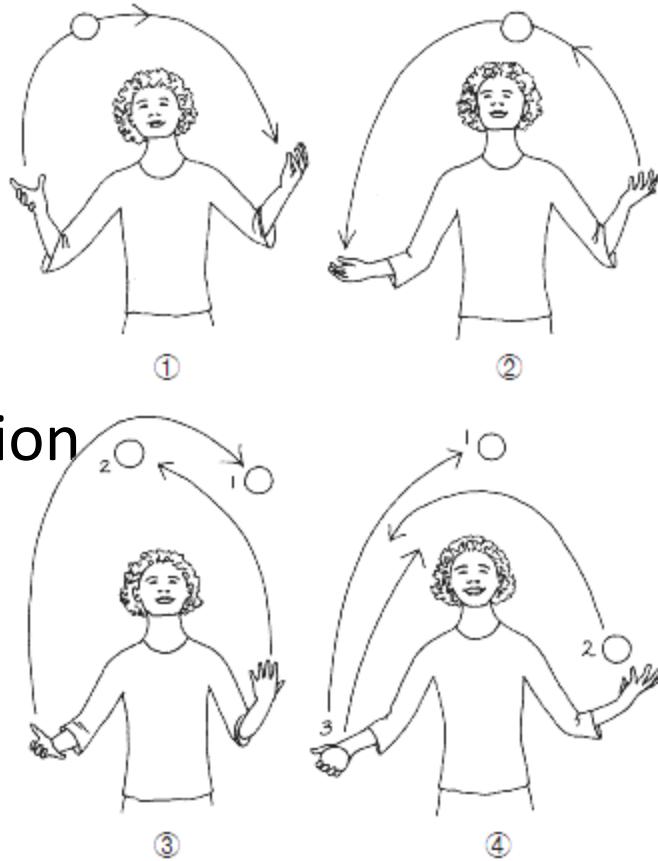
"WE ARE MADE OF STAR STUFF WE ARE A WAY FOR THE COSMOS TO KNOW ITSELF."

- CARL SAGAN



# Communication/Presenting Skill

- Its a skill!
- You can learn in!
- Tips and tricks
  - Universal
  - Different for different communication ways and environments
  - Latter apply in teaching!
- Practice makes perfect!
- **Start young! Students!**



# How We Communicate Science?

- Depends on
  - **Audience** – colleagues, general public, students, kids, media, politicians, teachers...
  - **What is your goal** – educate others, educate yourself, bring attention to your work, raise awareness, get a grant, change laws and regulations, get a good grade, graduate...
- **Communicate for the occasion**

# Communication Ways

- Live interactions
  - Experiments and demonstrations
  - Public lectures
  - Informal
- Interactions through media
- Digital interactions
  - Social networks
  - Blogs/podcasts/videos etc.
  - Citizen science
- Scientists competitions
- **Each suitable for different audiences and with for different goals**



Best Selfie Winners – International  
Cosmic Ray Day 2018

# Live interactions: Outreach Activities

- What you want:
  - Wow (inspire)
  - Educate
  - Get people to experience it
- How you do it:
  - Informal and/or hands-on
  - Science festivals and similar events
  - Competitions
  - School visits
  - Public lectures



# Science Festival Type Events

- Large, diverse audiences
- “3 min science”
- Shift gears fast between audiences
- Suitable for “wow science” and hands on experience



# Public Lectures

- Smaller, selected audiences (but can stream)
- Suitable to educate
- Longer
- Discussions



August 23rd 2020

Ivana Prodanovic - prodanvc@df.uns.ac.rs CONNECT 4.0, Neum



# Informal Settings

- Suitable for hard to get target groups
- More personal
- Pubs, clubs, cafes
- Music festivals



# Humanities and Arts

- Exhibits
- City Tours
- Theater
- Performances



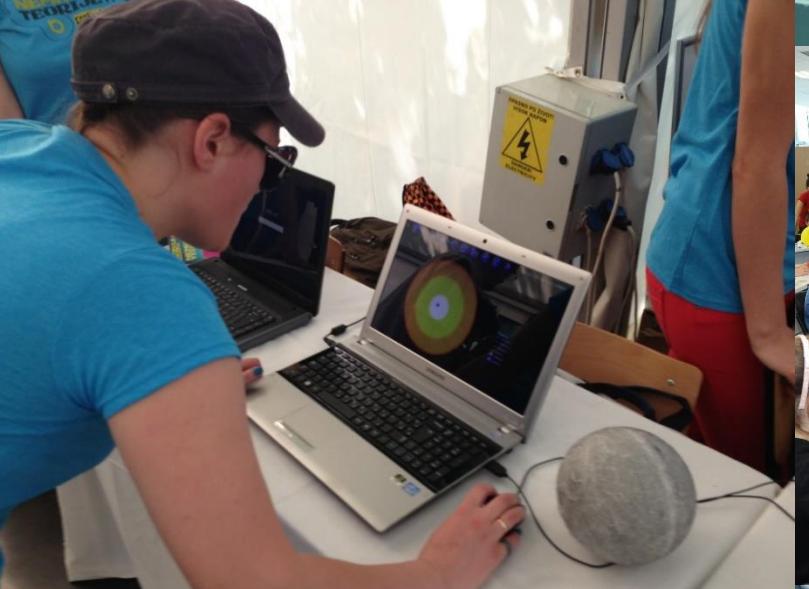
# Science on Wheels

- Mobile labs
- Mobile planetariums
- Bringing science to rural areas

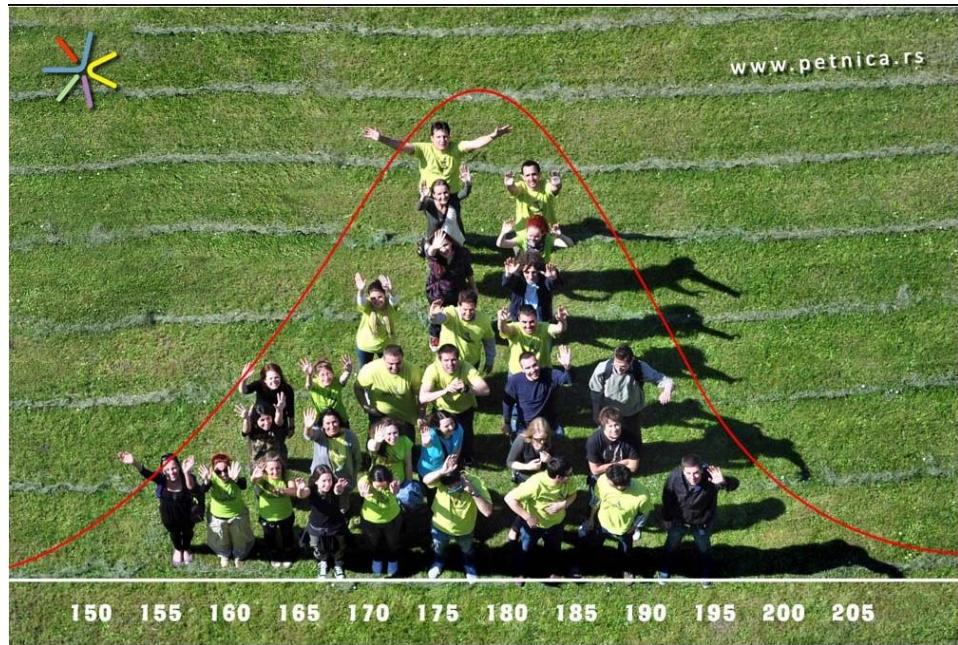


# Science Gamified

- Quizzes
- Escape Rooms
- Simulations
- Challenges, games



# Audience as Data



# Changing the Image of Science




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**DAAD** 32

# Changing the Image of Science



August 23rd 2020

Tijana Prodanović



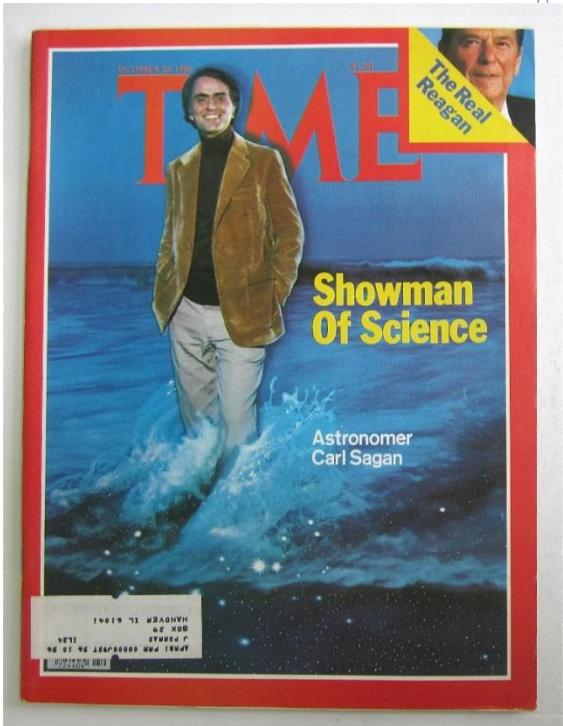
# Scientists Competing

- Short, interesting science presentations
- Great for boosting science communication
- FameLab
- Science Slam
- Dance your PhD thesis etc.



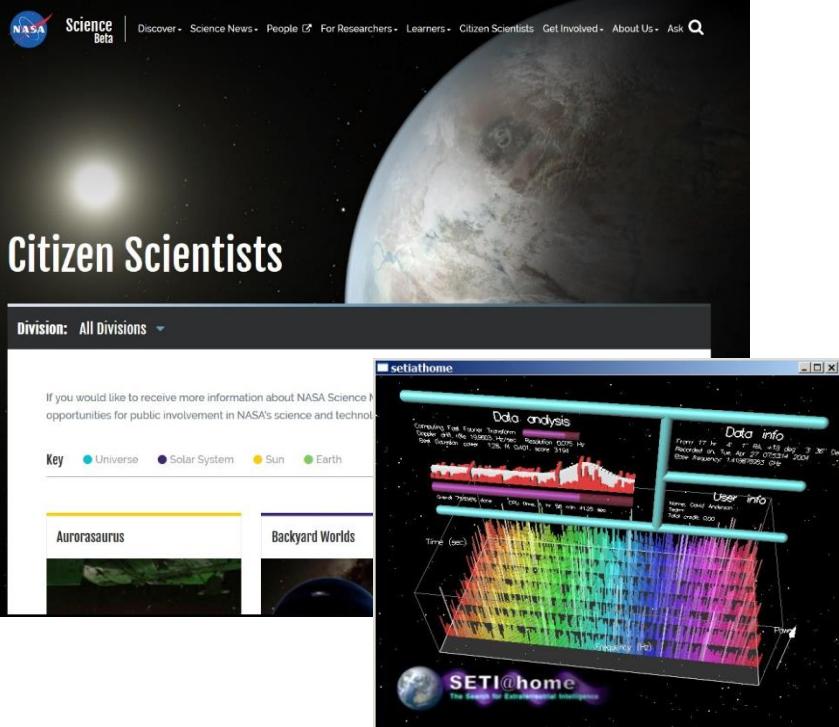
# Written

- Blogs, papers and magazines, online media
- What you want:
  - Get info across
  - Get people interested
  - Raise awareness
- How you do it:
  - Press release
    - Give audience what they want
    - Age of “click baits”
    - Make it easier for journalists
    - Don’t always have to be 100% scientifically accurate
  - Articles
  - Blogs

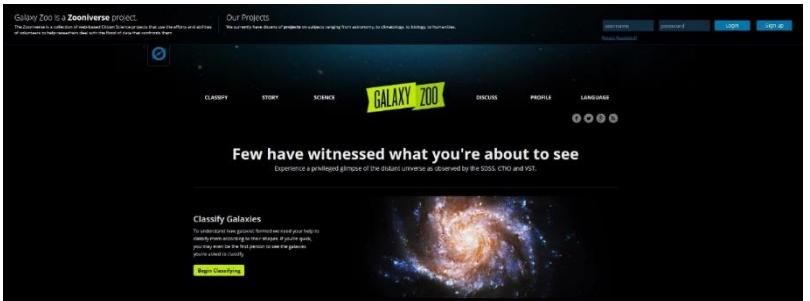


# Citizen Science

- Get general public involved
  - “Public researchers”
  - Learn better
  - More interested
  - Feel useful
- Large quantities of data
  - Collect and/or Process



The screenshot shows the NASA Science Beta website's "Citizen Scientists" section. At the top, there's a navigation bar with links like "Discover", "Science News", "People", "For Researchers", "Learners", "Citizen Scientists", "Get Involved", "About Us", and "Ask". Below the navigation is a large image of Earth from space with the sun in the background. The main title "Citizen Scientists" is displayed prominently. A dropdown menu "Division: All Divisions" is open. Below the title, there's a brief description about receiving information about NASA science opportunities for public involvement. A legend indicates categories: Universe (blue circle), Solar System (purple circle), Sun (yellow circle), and Earth (green circle). Two project thumbnails are shown: "Aurorasaurus" and "Backyard Worlds". On the right side, there's a complex data visualization titled "Data analysis" showing various plots and graphs, with a "User info" panel showing statistics like "Total credits: 600" and "Total Analysis: 1,419,678,212". The "SETI@home" logo is visible at the bottom.



The screenshot shows the Galaxy Zoo website, which is part of the Zooniverse project. The header includes links for "Our Projects", "CLASSIFY", "STORY", "SCIENCE", "GALAXY ZOO", "DISCUSS", "PROFILE", and "LANGUAGE". A banner says "Few have witnessed what you're about to see". Below it, a "CLASSIFY GALAXIES" section with a "Begin Classifying" button and a image of a spiral galaxy. The footer contains copyright information for the SDSS, GALEX, and VST surveys.



The screenshot shows the Globe at Night website. The header has links for "About", "Learn", "Observe", "Report", "Maps & Data", and "Resources". A main image shows a night sky over a desert landscape. A callout box for the "August, 2017 campaign" encourages users to observe and record the total solar eclipse. Another callout for the "Campaign dates & Constellations for 2017!" is also present.

# Communicate to Survive!

- People losing trust in science
- Scientists must learn to communicate!
- Start training at student level
- **Must adapt** for audience and occasion
- **Must get personal** – why care?
  - With scientists/researchers
  - With general public
- Show science how you love it – fun and personal!

# Thank you!

# Questions?