Presentation & Other Verbal Communication Skills

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Who is Armando Solar-Lezama?

• BS in Computer Science and Math: Texas A&M University 2003
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• @MIT ever since
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- BS in Applied Physics, Angelo State University 1994
- MS in Computer Science, Rochester Institute of Technology, 1999
- PhD in Computer Science, University of Houston, 2010
- Assistant Professor, Rochester Institute of Technology, 2010-2016
- Associate and Full Professor, Gallaudet University, 2016-Now
A talk is not a paper

• The talk should not substitute the paper it should enhance it
  • precision vs intuition
A talk is not a paper

• Time
  • In a paper, the reader controls the pace and focus
  • In a talk, the speaker is in control
\[ [x_1 := E] \#(Y) = Y' \sim h_{Y'} \] where \( h_{Y'} \) is defined by the following integral.

\[ h_{Y'}(x') = \int_{x \in \mathbb{R}^K} D(E, i, x, x') \cdot h_Y(x) \, dx \]

\[ [P_1; P_2] \#(Y) = [P_2] \#([P_1] \#(Y)). \]

\[ [\text{if } B \text{ then } P_1 \text{ else } P_2] \#(Y) = \]

let \( v = [B] \#(Y) \) in

\( ([P_1] \#(Y \mid B)) \sqcup_v ([P_2] \#(Y \mid \neg B)) \).

Let \( P' = \text{while } B \{ P_1 \} \); let us also set
\[ Y_1 = [P_1] \#(Y \mid B). \]

For all \( j \geq 0 \), let us define a map:
\[
[P']_j \#(Y) = \begin{cases} 
Y & \text{if } j = 0 \\
\text{let } v = [B] \#(Y) \text{ in} \\
([P']_{j-1} \#(Y_1)) \sqcup_v Y & \text{otherwise.}
\end{cases}
\]

Now we define: \([P'] \#(Y) = \lim_{j \to \infty} [P']_j \#. \] \(\square\)
Smooth Interpretation: Branch

if( x > 0 )
Smooth Interpretation: Join

if( x > 0 )

true

false
Smooth Interpretation: Join

if( x > 0 )

true

false
Smooth Interpretation: Assignment

\[ x = x - y; \]

\[ x = -y; \]
A talk is not a paper

• Make Your Presentation Accessible
  • Speak all of the text on the slides
  • Verbally explain visuals and videos
  • Add captions to videos
  • Use large fonts
  • Use minimalist graphics whenever possible
A talk is not a paper

• Related work
  • in a paper thoroughness is important
  • what is important in a talk?
Related work
Work you are building upon

• Defining the contribution
  It should be clear to the listener what you are claiming as novel, and what comes from somewhere else
Related work

Work you are competing with

• Highlight the delta
  In what dimensions is your technique better
  What are the tradeoffs (be fair)
unRelated work

Work that sounds like yours but is not

- Be aware of it in framing the problem

- Different forms of this
  - Similar problem but in a different context (distributed computing vs. HPC)
  - Similar sounding problem
A talk is not a paper

• A talk is interactive
  • Why else would I bother to travel from across the country to be here
  • (ok, so I am sitting in my guest bedroom, and you are watching a recording of me, but still, in general interaction is important)
Explicit interaction

• Questions
Questions

• Make sure you are answering the right question
  • Repeat the question and clarify
  • Questions often have a context, be aware of it
Questions

• Make your answers concise and to the point
• If you don’t know, say you don’t know
  • Related work questions “I am not aware of that work, but I’d love to learn more about it”
  • Factual questions about your work “I don’t have that off-the-top of my head, but I can find out for you”
  • Hypotheticals “I have not thought of that, but that’s an interesting direction to explore”
Aggressive questions

• More common in some communities than others
  • Value questions: “Why are you doing this”
  • Technical questions: “You are doing this wrong”
  • Inappropriate questions
    • deflect and report

• Avoid getting drawn into a brawl
  • This isn’t twitter
Implicit interaction

• Eye contact

• Pace

• Affirmation
The overpracticed talk

• There is no such thing as too much practice

• Often means you are failing at implicit interaction

• Practice better
Practice

• Content

• Delivery

• Interaction
Practice: Content

• Transitions and Introduction
  • A critical part of your talk
  • Write them down
Practice: Delivery

• Record yourself!
Practice

• Find an audience
• Don’t worry about timing
• Ask for feedback often during the talk