

Overcoming Insufficient Academic Preparation: Perceived and Real

*Dilma Da Silva
Daniel A. Jiménez*

Texas A&M University

Dilma Da Silva

Education

BS 1986 USP-Brazil / MS 1990 USP/ PhD 1997 Georgia Tech

Professional (Academia → Industry → Academia)

- Professor at USP-Brazil 1996 -2000 (tenure 2000)
- Research Scientist at IBM TJ Watson 2000-2012
Manager since 2007; several other leadership titles
- Principal Engineer&Manager, Qualcomm Research (2012-14)
- **Professor and Department Head, Texas A&M University**

Personal

- 1 cats, 125+ first cousins;
- Single except for 8 years ☺
- caretaker 2010-2015
- Fun: knitting, reading, travel with people I love,
babysitting for friends



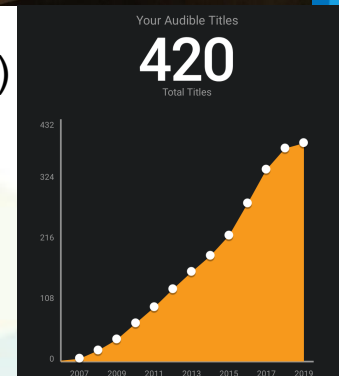
Earth

7,900 lifetime miles



a distance that's akin to taking a
rough the center of the earth, you
u've got commitment to the core.

rned on October 14, 2018



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Daniel A. Jiménez

- Education

- BS/MS Computer Science, UT San Antonio 1992/1994
- Ph.D. Computer Sciences, UT Austin 2002

- Jobs

- Instructor/Research UT Health Science Center San Antonio
- Assistant/Associate Professor, Rutgers
- Associate/Full/Department Chair, UT San Antonio
- Professor, Texas A&M University
- Occasionally consult with Samsung SARC
- Now on sabbatical at Barcelona Supercomputing Center (3rd time)

- Area

- Computer architecture: branch prediction, cache management
- Invented perceptron branch predictor currently in your PC or phone

- Personal

- Dual citizen USA/México
- Born and raised in Texas
- Married with one daughter
- Turning 50 this year!



Identifying Insufficient Academic Preparation

Assessing Academic Preparation

- **All of us** find ourselves insufficiently prepared
 - Essential for growth and part of pursuing innovation
- Both speakers have plenty of old and recent examples
- Let's pair and share
 - One situation you found yourself insufficiently prepared with knowledge
 - One situation you thought you were unprepared, but your perception

Assessing our own Academic Preparation

- **All of us** find ourselves insufficiently prepared
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- Let's hear some examples from the audience

Assessing our own Academic Preparation

- **All of us** find ourselves insufficiently prepared
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- Let's pair and share
- Let's hear some examples from the audience
- It feels difficult if perceived as weakness
 - Some of us can easily fall into patterns of shame and regret

Assessing Academic Preparation of **other** people

- Even harder!
- Human beings make judgements constantly
 - At least this is what cognitive scientists and psychologists tell us
- Think of a recent situation where you underestimated someone capabilities
- Now one where you overestimated ...
 - ... and you are glad you did it
 - ... and you made things worse

**I believe I am unprepared
while taking a course 😞
What do I do?**

Techniques to catch up in the context of a course

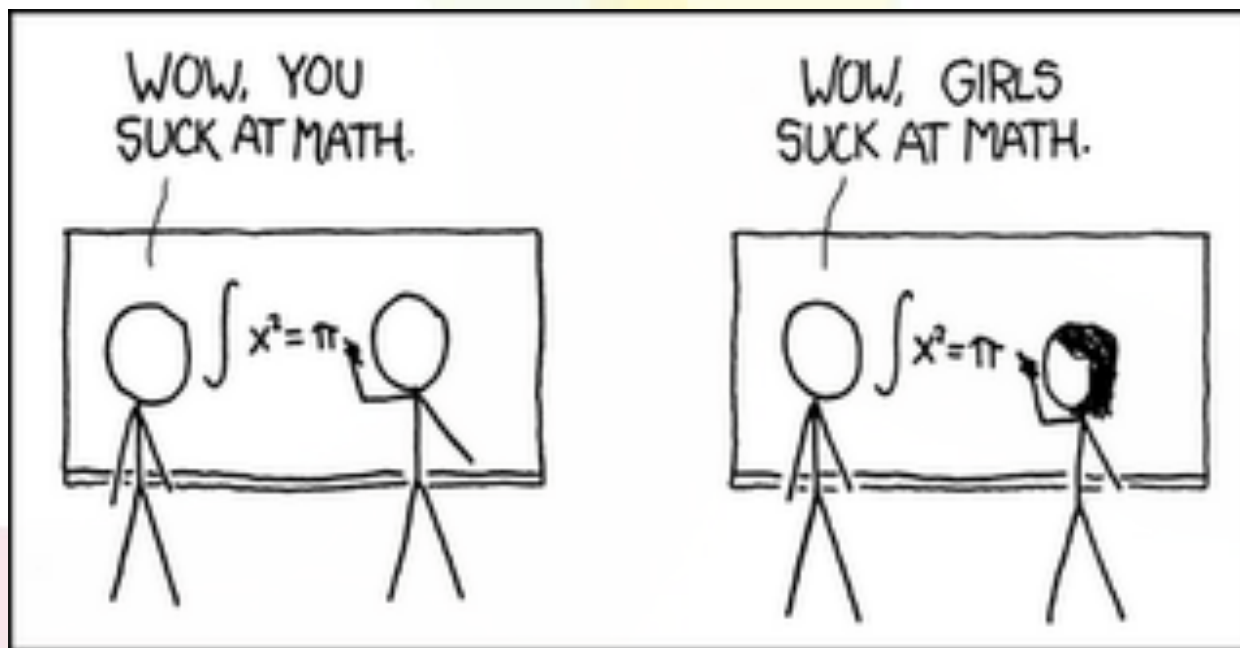
- How did you handle it in the past?

Techniques to catch up in the context of a course

- How did you handle it in the past?
- From the speaker's experience:
 - See if you can find guidance about how to address gaps
 - Instructors, TAs, classmates, teammates, advisors
If you don't feel comfortable with the ones available, approach a senior faculty, administrator/manager or senior peer and talk about how to find people to support your general growth
 - Leverage support: office hours (TA and faculty), videos on the web, study groups, peer teachers
 - If you have time to prepare before taking the course, consider TAing or helping with the pre-requisite course

More from the speakers's experience in the context of courses:

- Let go of perfectionism
- Let go of **vanity** and shame
- Let go perceptions of you as representing your tribe



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**My preparation level is underestimated
by instructor or classmates 😞
What do I do?**

Techniques to correct perceptions of insufficient preparation in the context of a course

- How did you handle it in the past?

Techniques to correct perceptions of insufficient preparation in the context of a course

- Tactics the speakers have seen:
 - Ignoring
 - Point it out (in a thoughtful, non-reactive way)
 - Making a point of speaking up where there are opportunities to "shine"
 - Offer help to other people who may be struggling
 - Visit office-hours showing complete work and asking for pointers to more advanced material
 - Document it in course/TA evaluations

Techniques to correct perceptions of insufficient preparation in the context of a course

- What to do as a standby?

Techniques to correct perceptions of insufficient preparation in the context of a course

- What to do as as the perpetrator, i.e., what is the most constructive way for people to correct their underestimation mistakes and biases?

**I believe I don't have sufficient
preparation for my
research project 😞**

What do I do?

Catching up with gaps in research background

- Get help in assessing the gap
 - It is often smaller than you think
 - Find concrete suggestion of what to read or problems to practice
- Be aware that going after better preparation is a common procrastination technique
 - Research is hard. (Most valuable things in life are hard.)
It is tempting to stay in the learning phase instead of venturing in the producing phase of the work
- **How do you handle it?**
What worked for you?
What did not work ?

From the speaker's experience

- For certain areas, you need knowledge on how to build the artifacts you need for your research
- Being active in reading groups, offering to present classic papers related to your work
- Dedicate a daily slot of time to learning or building for the purpose of learning
 - Spend no less and no more time to it
 - Finish the slot with a clear plan of what to start with in the next day
- Tactical practice
 - As you learn, practice necessary skills
e.g., writing summaries of papers and critical review of the literature or building piece of software needed in other projects

My preparation for this research project is being underestimated 😞

What do I do?

Correcting perceptions of insufficient preparation

- Did it happen to you ?
 - Does it still happen after we graduate?
- How do you handle it ?

From the speaker's experience

- It can be painful: leverage your support group
 - Don't have one?
It has been a game changer for many careers
- Don't take it personally
We all make judgements and many are incorrect

From the speaker's experience

- Speak up and show initiative: getting the spotlight is not a bad thing
- Know your strengths and look for opportunities to make them known
- Be well prepared for meetings and presentations
- If you find “gold stars” and awards silly ...
... it may be helpful to think of them as part of being well-dressed for the occasion

Thank you!

Dilma Da Silva dilma@cse.tamu.edu

Daniel A. Jiménez djimenez@cse.tamu.edu



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