

Academia vs Industry: Choose Your Own Adventure

Dilma Da Silva, Texas A&M University

A vs B: So Simple, Right?

Industry could be:

- Engineer
- Research scientist
- Eng manager
- Corporate Leadership
- Consulting
- Government
- Start-up

- **Academia** could be:
- Professor at research-oriented university
- Teaching-oriented position
- Academic administration
- Research associate

Turn and Talk to Your Neighbor

What is your plan?

Industry vs Academia vs Undecided?

Why?

How do you enjoy spending your time?

About me

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 Univ

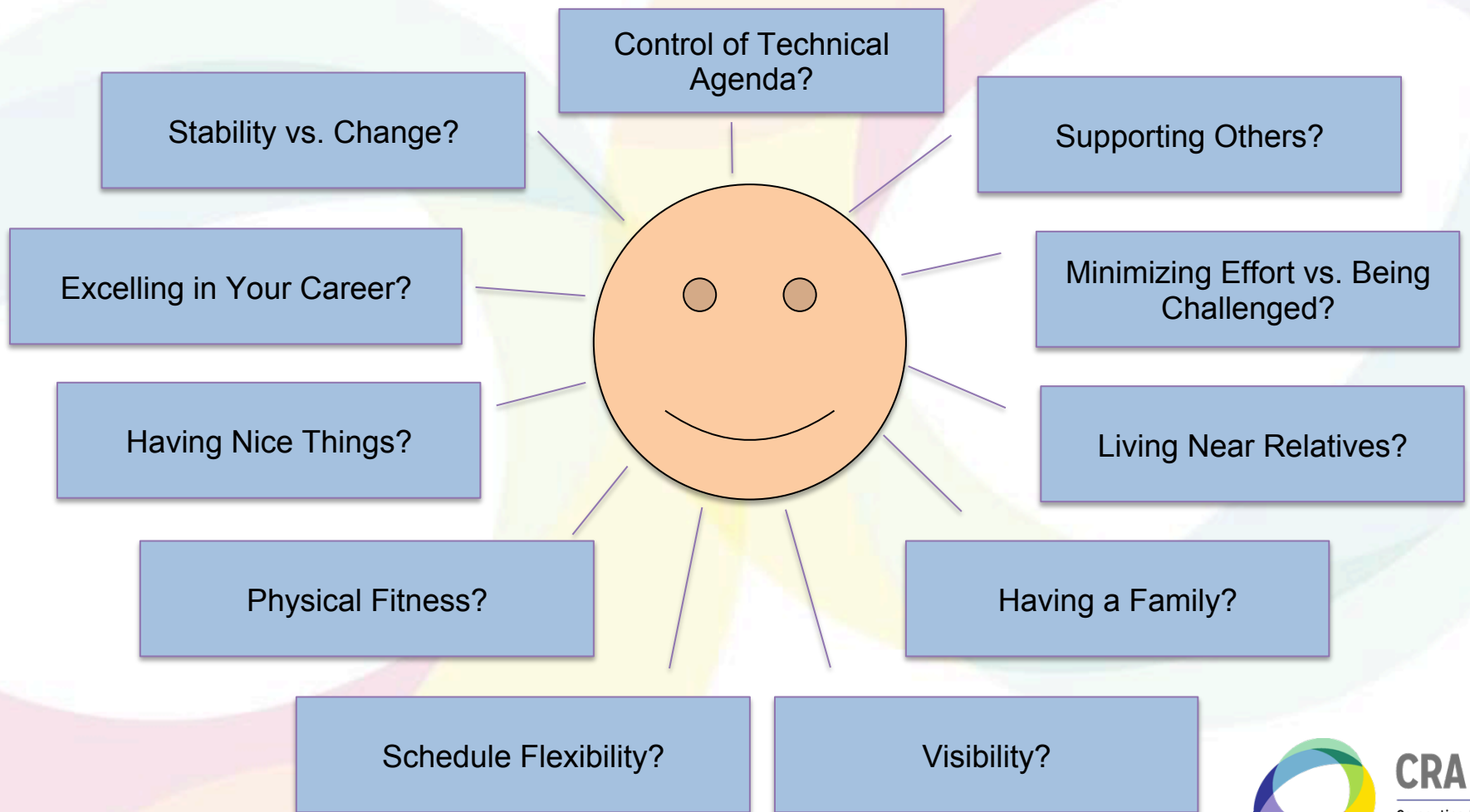
Personal

- 2 cats, 125+ first cousins;
- Single except for 8 years ☺
- caretaker 2010-2015
- Fun: knitting, reading, travel



What is Important to You?

Must-haves vs. Nice-to-haves?



Does What You're Doing Align With What's Important to You?

- What you value most could change over time
- Absolutely no one is in your exact situation
- A PhD gives you options
- Be true to yourself and your values
- Don't be afraid to course correct

Academic Careers

Academic Career Ladder

Professorial Ranks

- Assistant: Tenure-track, 5-7 years
- Associate: Usually with tenure
- Full (no set time limit to achieve)
- Chaired Professor – endowed

Administrative Ranks

Department Chair/Head, Dean, Provost, President

Instructor

Can vary significantly on course load
Some roles offer tenure equivalent

Postdoctoral/Research Associate

- Usually on “soft money”

Traditional Professor/Instructor Roles

Research universities

- Ph.D. program - emphasize *research, funding*

Teaching-oriented colleges

- B.S. program – emphasize *teaching, service*

Public vs. Private

- Impacts funding structure

What can I do now to prepare for an academic job?

- Research

- Apprenticeship: learn from advisor, write papers, collaborate
- Grant writing: Help out on proposals, read successful proposals
- Corporate connections (for funding, student job placement)

- Teaching

- Guest lectures, teaching assistantships
- Professor-in-training programs, courses

- Service

- Organizing student organizations/support groups – Women in CS
- Working on department committees
- Volunteering at conferences

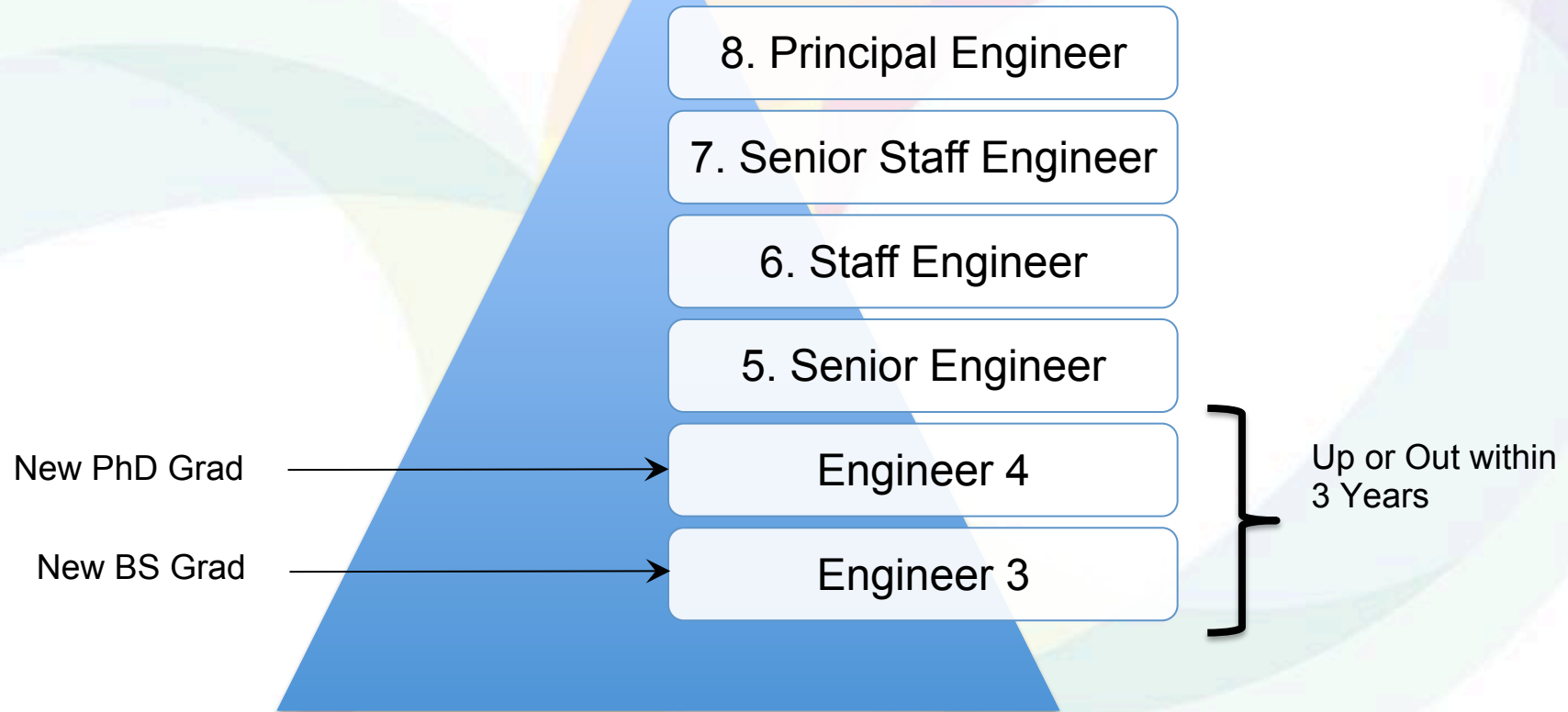
Industry Research Careers

Industry Careers

Role	Visibility	Flexibility
Engineer	Low	High
Research scientist	Medium	High
Eng Manager	Medium (all internal)	Medium
Corporate leadership	High	Low
Consulting	Low	Varies/Low
Government	Medium	High
Start-Up	Low	Low

Same role can vary a lot from group to group

The Engineering Ladder



Implications: Pay, Expectations

Career Change

Moving Between Industry and Academia

- **From University to Industry**

- Must build real systems
- Establish visibility and knowledge in industry
- Need to pass a technical interview (coding, complexity)

- **From Industry to University**

- Must continue publishing
- Establish visibility and reputation in research community
- Need to pass an academic interview (presentation, strong publication record)



My change story ...

All Choices are Valid!

- Do what you love
- If you don't love what you're doing, do something else
- A PhD gives you that option
- Take ownership of what you do now and what you want to do next

Questions ?



CRA
Computing Research
Association