

Academia vs Industry: Choose Your Own Adventure

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My Significant Moments

Karina Edmonds

SAP | SVP Head of Academies & University Alliances

1

Immigrated from
Dominican Republic



2



Encouraged to
consider a different
career path



Distinguished Alumni Award



3



Engineering Hall of
Fame, Distinguished
Alumni, Board of
Trustees

4



Caltech
Aeronautics &
Materials

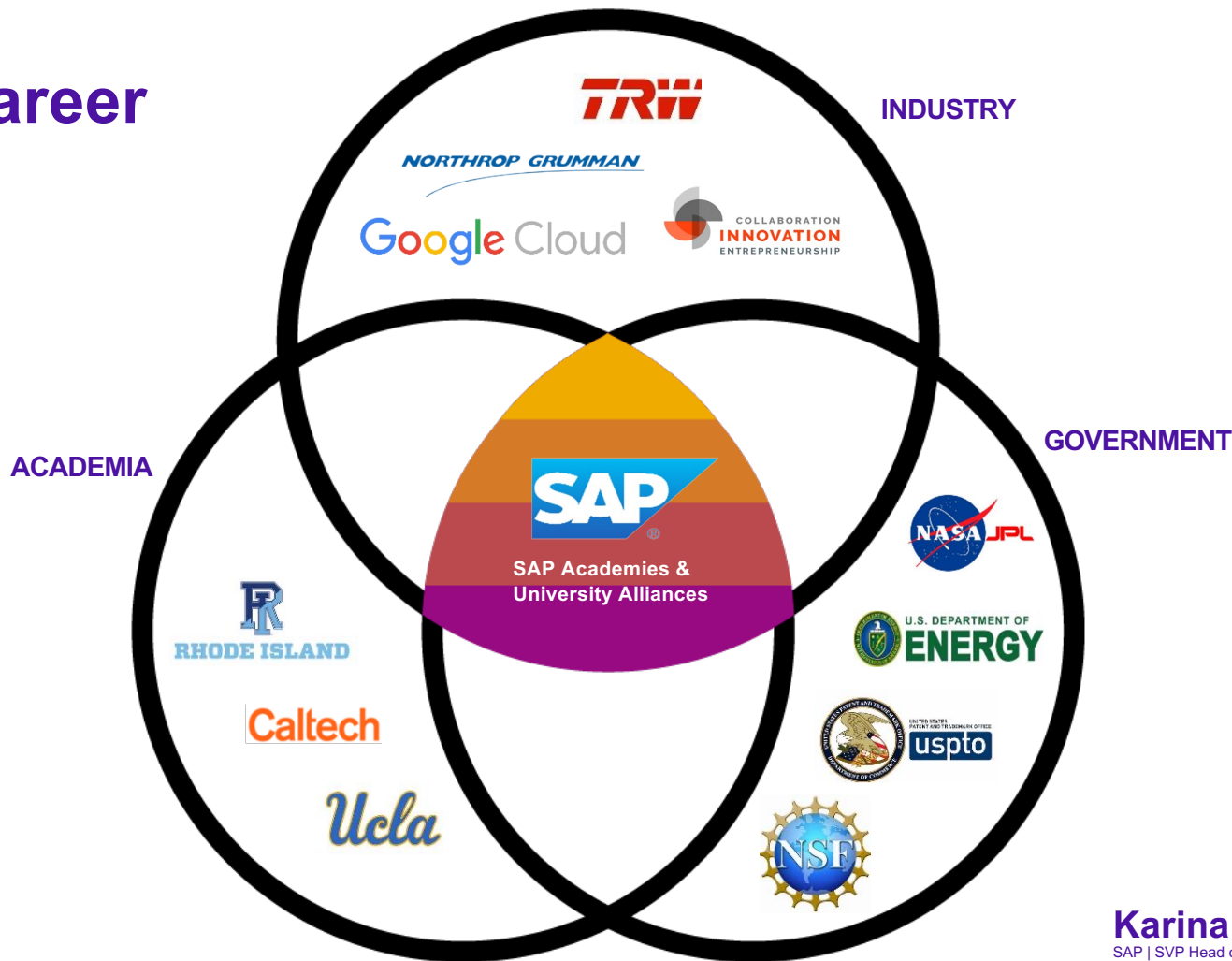


5



Proud mother
of 3 strong,
intelligent,
kind daughters

My Career



About Dilma

NOW



7.5 years in different roles:

Professor (since 9/1/20) + interim director of the TAMU Cybersecurity Center

Professor and part-time Associate Dean (2019-2020)

Department Head and Professor (2014-2019)

BEFORE



Principal Engineer & Manager
Qualcomm Research
2 years



Researcher; Manager
IBM T.J. Watson Research Center
12 years



Assistant Professor
University of São Paulo, Brazil
1996-2000

EDUCATION



PhD
Georgia Tech



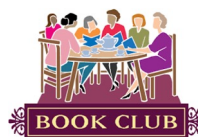
BS, MS in Computer Science
University of São Paulo, Brazil

CURRENT ROLE

Research Areas: Distributed Systems, Data Science, Cybersecurity, CS education

Multidisciplinary efforts: Food Safety, Energy Systems, Transportation, Personalized Education

FUN



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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?

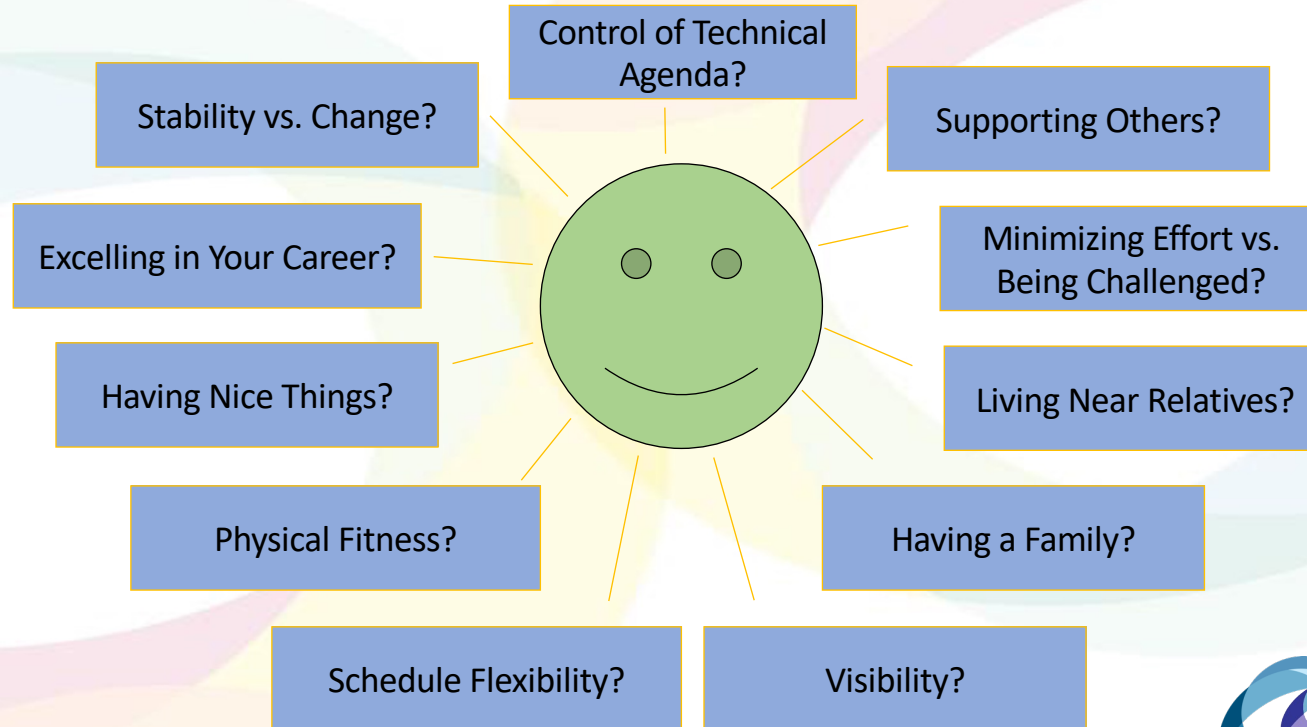
Industry vs Academia vs Undecided?

Why?

How do you enjoy spending your time?

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



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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



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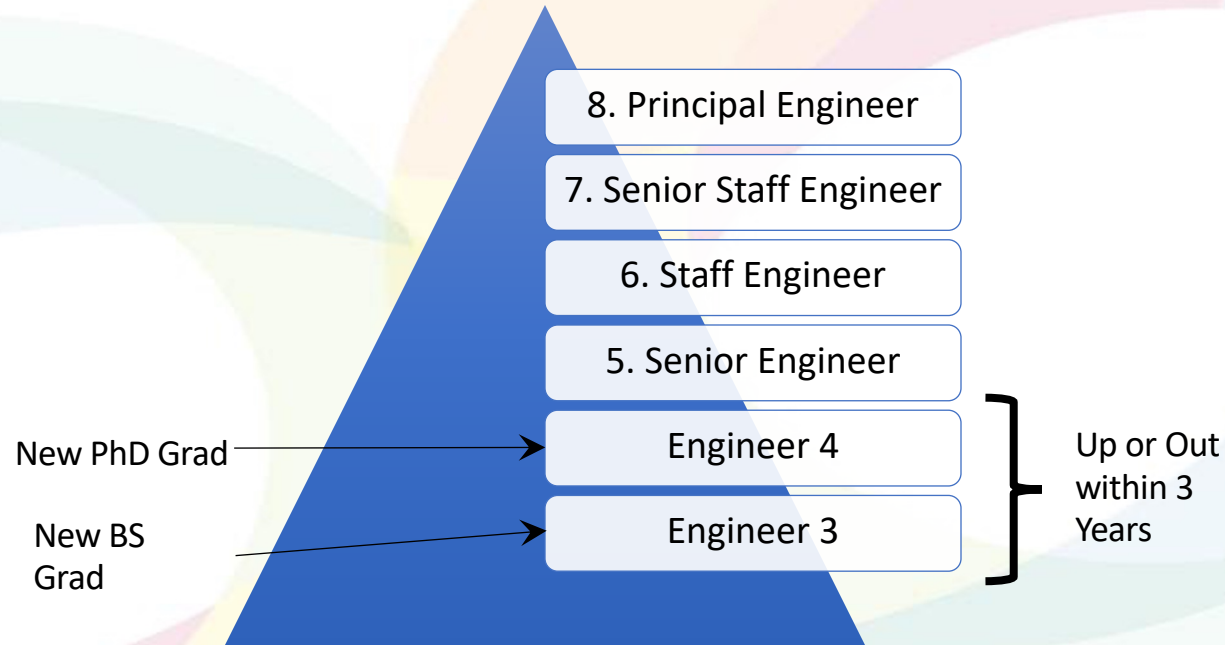
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Industry Careers

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



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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)

Turn and Talk to Your Neighbor

**What (if anything!)
did you hear that
changed or confirmed
your view of these paths?**

(Is it ok your partner share it with the rest of us?)

Our “change” stories ...



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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 ?



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