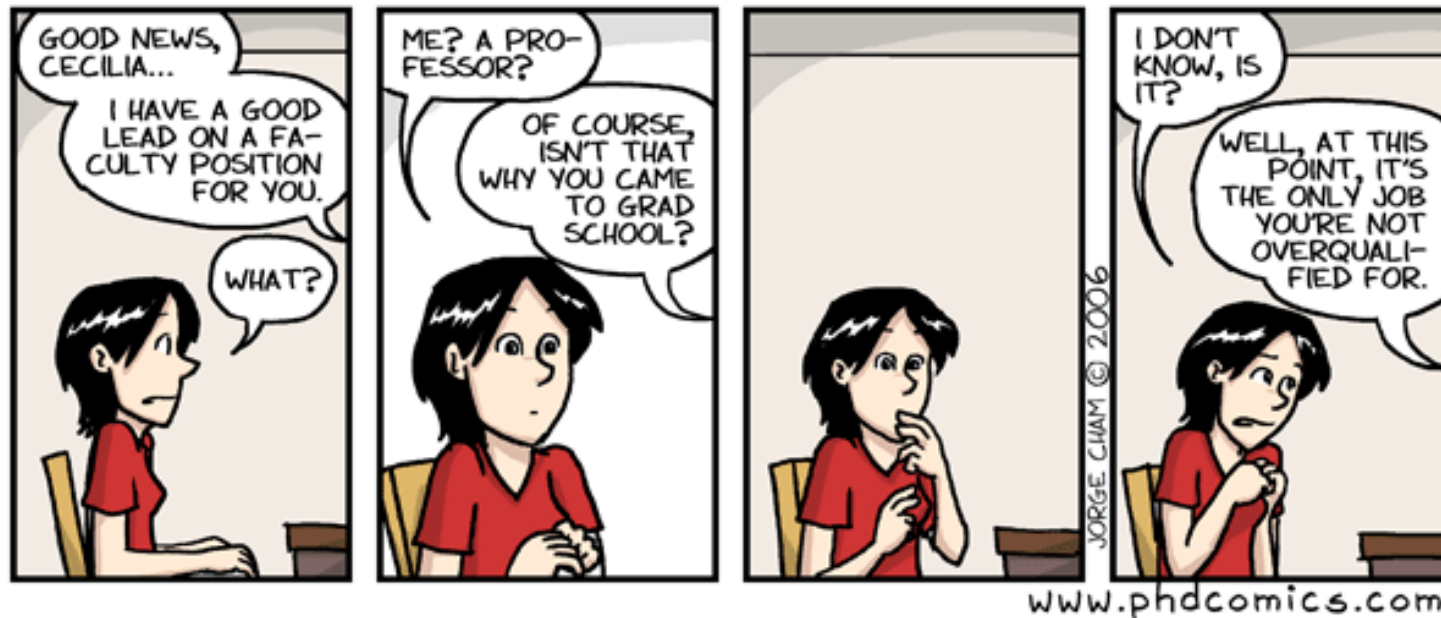


# The “Job Talk” Talk

## Collected wisdom on the academic job hunt

Thomas Wenisch



Special thanks to: Anastasia Ailamaki, Doug Burger, Babak Falsafi, Mark Hill, James Hoe, Andreas Moshovos, Todd Mowry

# What this talk is about

## Preparing for academic interviews

- Application process
- The all-important “Job Talk”
- Other tips, tricks & collected wisdom

Geared towards tenure-track positions  
at top-20 research institutions

# Who should be here

Anyone considering academia ...

... whether you graduate soon or not

If there is any chance you want academic job,

**make academia your focus**

- Preparing for academia also prepares for industry
- But, not necessarily the converse

# What to remember (if you forget the rest)



Planning starts **2-3 years** before you graduate



Application packet has 1 goal: **get an interview**



Job Talk must target **broad audience**, not experts in your field



1-on-1's are about **personality, rapport & potential for collaboration**

# Outline

- **Academic jobs**
- Preparing for the job market...
  - Early preparation
  - Your application packet
- The interview
  - Preliminaries
  - The Job Talk
  - One-on-one meetings

# Academic Jobs

## Tenure-track (research school):

- 6 years (typical) to prove you are **world-class** researcher and **competent** educator
- 80+ hour weeks (but you pick which 80)
- Key to success: good students

## Tenure-track (teaching school):

- 6 years (typical) to prove you are **innovative** educator and **competent** researcher
- Many top teaching schools don't have grad programs

# Academic Jobs

**Post Doc:** Temporary employment as super-grad-student

- Objective: parlay into tenure-track w/in 1-2 years
- Do a post-doc if you need:
  - Hang around till the job market improves
  - More time to improve your curriculum vitae
  - More prestigious letters of recommendation

**Research Faculty:** Research-only soft-money position

- Advantage: Allow amazing research productivity early on
- Disadvantages: Don't usually lead directly to tenure
  - Need grants to fund your own salary

# Academic Jobs

**Lecturer:** Teaching-only position at a research school

- No tenure
- Higher teaching load
- Typically undergrad-focused

**Industrial Researcher:**

- Key difference: you do the research (instead of students)
- Better pay
- My advice: go to a lab that publishes



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# Early preparation

A great application rests on 3 fundamentals:

- Strong publication record
- Dissertation impact is easy to grasp
- Outstanding letters of recommendation



Your last year is too late to fix these

# Early preparation strategies (1)

- Choose a dissertation that:
  - Rests on clear motivation
  - Demonstrates technical competence
  - Includes academic rigor
- Get strong letter writers:
  - Via internships
  - By inviting thesis committee members

## Early preparation strategies (2)

### Achieve visibility in your community

- Go to conferences
  - Give talks
  - Ask questions at talks
  - Skip the talks and hang out in the hallway
  - Introduce yourself to faculty
  - **Don't hang out with Michigan students**
- First author on more papers
- Maintain an informative personal website

**Your goal: everyone should know your name**

# Your Application Packet



**Objective: Get an interview**

1. Cover letter
2. Curriculum Vitae
3. Research statement
4. Teaching statement
5. Sample papers (optional)
6. Letters of recommendation (guide for letter writers)

Find my packet at <http://www.eecs.umich.edu/~twenisch/>

# Cover Letter

Example outline:

¶1: who you are, what position, when you graduate

¶2: your future research interests

¶3: your past research accomplishments

¶4: your teaching experience

¶5: fluffy closing paragraph

Customize for each application

# Curriculum Vitae

Emphasize:

- Research interests
- Education
- Honors/awards
- Publications

Unlike resume, CV can be arbitrarily long

- But make it easy to navigate

# Research Statement

## Part 1 – Your past research contributions

- Single narrative, not laundry list
- Focus on impact
- Cite your publications

## Part 2 – Your research plan

- A plausible 5 year plan with concrete initial steps
- Focus on impact, breadth, diversification from thesis
- Not a commitment

**Objective: demonstrate vision and planning**



# Teaching Statement

## For research institutions:

- Summary of teaching experience
- List of topics/classes you can teach
- Some well-written fluffy teaching philosophy

## For teaching institutions:

- Summary of teaching experience
- Thorough educational philosophy
- Innovative teaching approach/plan

# Letter Writer Guide

## Observations:

- Writing good letters is hard
- Your recommenders are fundamentally lazy

**You must ease their writing burden!**

## Provide letter writer guide

- Brief paragraphs summarizing your contributions
- Notable activities/experiences

# Applying (1)



Ignore department hiring priorities

In fact, apply even if they aren't hiring

- Priorities are negotiated by committees that never agree
- You may be a “target of opportunity”
- Top departments care about quality, not research area

## Applying (2)



### Identify your champion

You only get an interview if an insider pushes your case

- Send a personal message to faculty you know...
- ...or have your advisor send one
- Politely ask about the status of your case (late Feb.)
- See advice on pressing the flesh at conferences

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# Interview structure

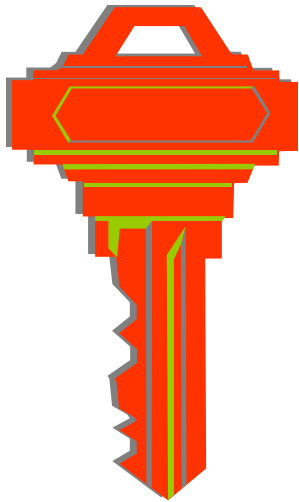
- Job talk
  - 60 minute presentation, including questions
  - **The most critical element of the interview**
- 1-on-1 interviews
  - 30-60 minutes technical discussion
- Student meeting
  - **Always** ask for a student meeting
- Dinner
  - Don't be fooled – this is part of the interview

# The scheduling game

- Academic interview season (noun):  
*a multiplayer game with hidden valuation functions and hidden information*
  - Your scheduling objectives
    - 1-2 “practice” interviews
    - Favored schools in the middle of the season
  - Their scheduling objectives
    - Strong schools: see every candidate before deciding
    - Weaker schools: pressure you into quick decision

# The Job Talk

The primary goal of your job talk:



Convince faculty who  
**are not in your area**  
that you should be hired

If those in your area didn't like you,  
you wouldn't have an interview



## Other objectives

- Show teaching ability
  - 1-2 slides “teach” background that experts know
- Show intellectual rigor
  - Include theoretical or analytic component
- Show experimental/implementation skills
  - Describe strong methods, substantial engineering

Show that you are multi-dimensional researcher

# Timing



**Thou shalt finish on time...**

...regardless of how often they interrupt

- Don't go over 60 minutes
- Try to leave time for questions at the end
- Skip slides if needed
- Use strategies to forestall excessive interruptions

**Running over is a showstopper in some depts.**

# What to talk about

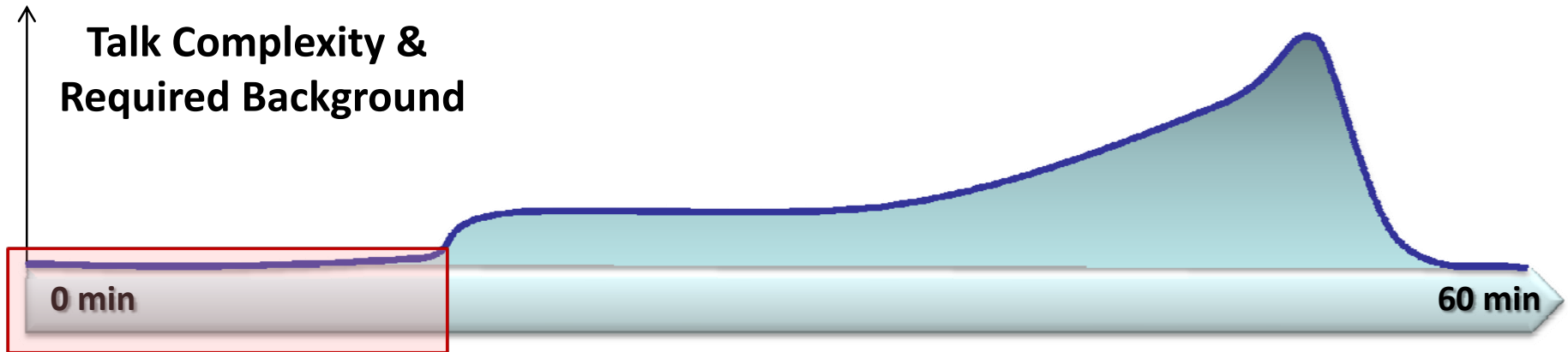


**Your talk should be a single narrative...**

...not a list of everything you've done

- Cover only **one project** in depth
- Advertise other work at the end
- Typically, should be about your dissertation
- Cite your papers in your talk  
(advertise top-tier publications)

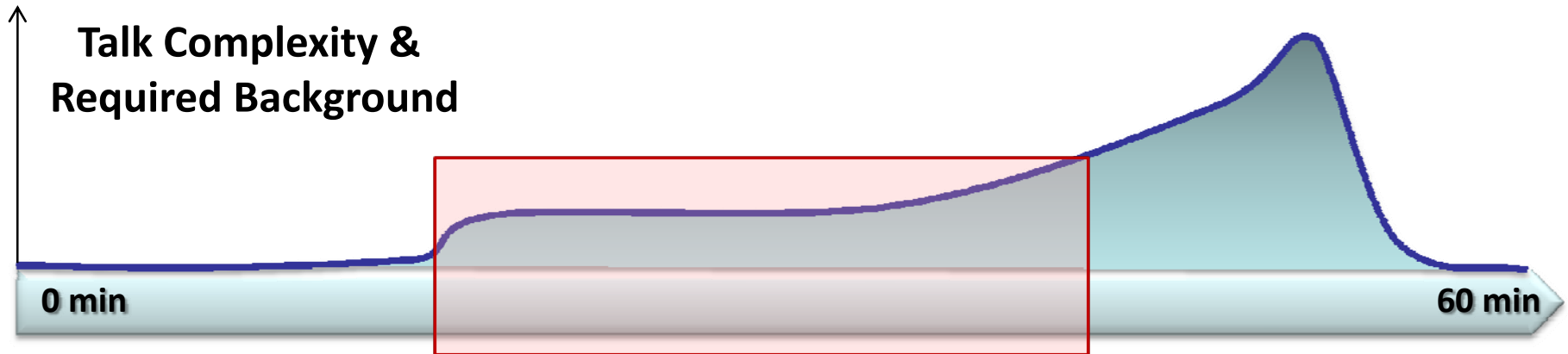
# Talk structure



## Part 1 – Introduction

- Address broad audience
  - Target to undergrad-level knowledge
- Emphasize **motivation, impact**
- Good opportunity to demonstrate teaching

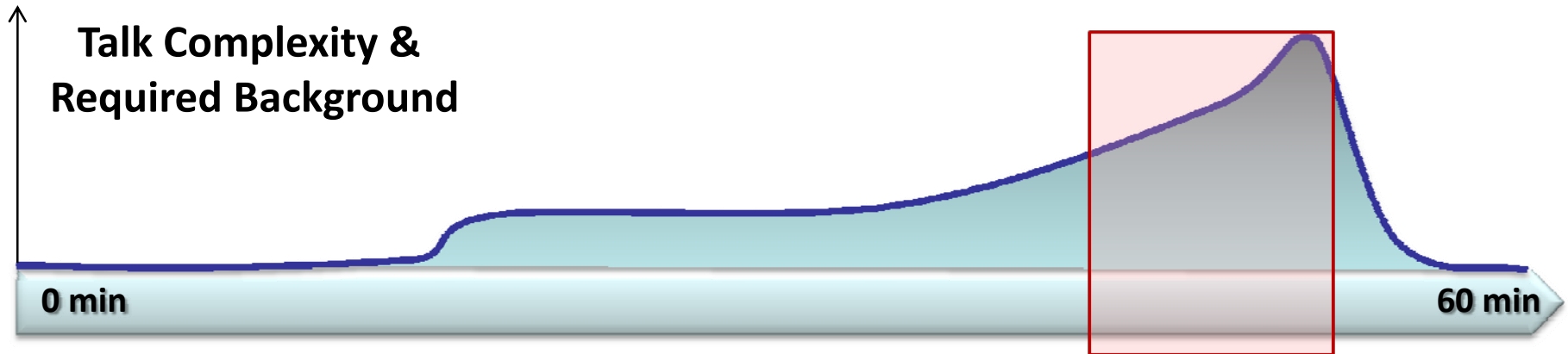
# Talk structure



## Part 2 – Body

- Address entire faculty
  - Assume only a passing familiarity with the field

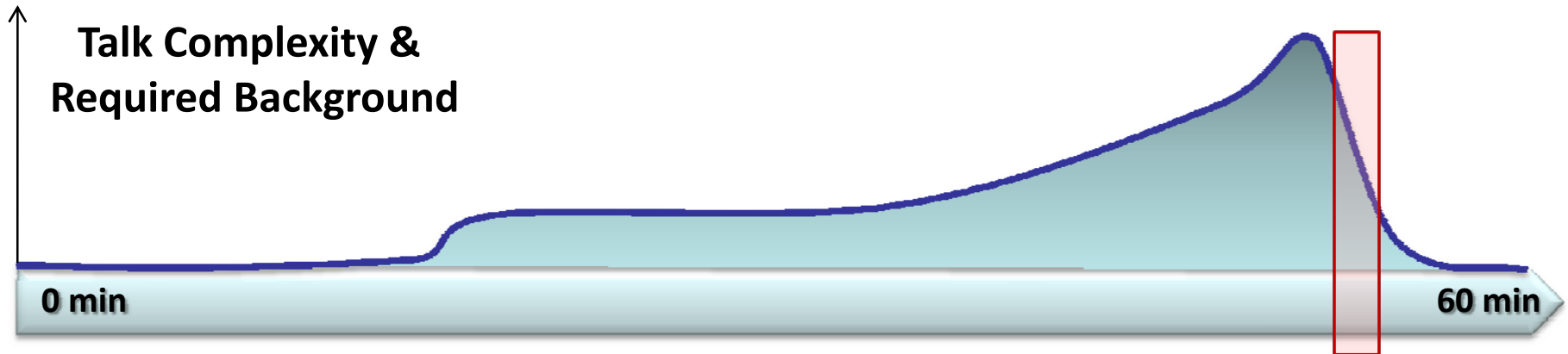
# Talk structure



## Part 3 – Detail

- Address domain experts
  - Target a typical conference audience
  - But, ensure non-experts can understand **impact**
- Demonstrate rigor, technical depth

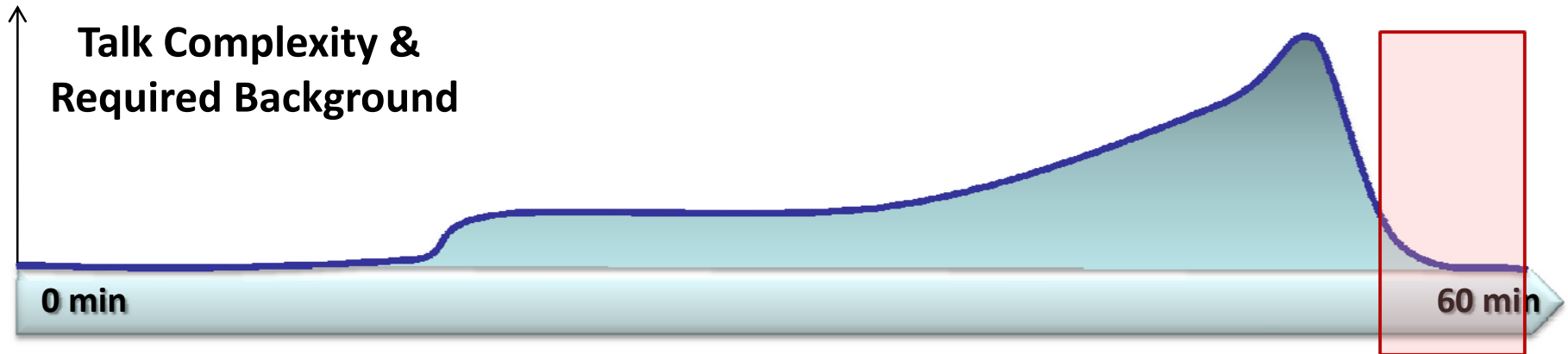
# Talk structure



## Conclusion

- Jump back to highest level
  - Back to targeting undergrads

# Talk structure



## Other Contributions & Research Plan

- One-slide ads for other major contributions
- Motivation/vision of your 5-yr. research plan
- **Specific** next research steps (e.g., 1-2 yrs.)

**Your objective: seed topics for 1-on-1 meetings**



# One-on-One Interviews (1)



Master your **elevator pitch**

- 3 minute version of your job talk
  - Many faculty miss the talk, want a recap
  - The magic is to keep it fresh, not canned



Know who you are meeting

- Study their web pages the night before

## One-on-One Interviews (2)

Interview objective is one of:

- If research collaboration is plausible, establish potential for collaboration
- If collaboration would seem contrived, try to achieve “mutual appreciation” of research significance

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