

## So – You Want To Be a Faculty Member??

or

*Everything you need to know about being a faculty member but didn't know you should ask!!*

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## Summary

- Presentation created as an overview to the many dimensions required in academic life
- Note: slide summary available on my website

Who should see this presentation?

- Any PhD student or PDF interested in becoming a faculty member

## Who Am I?

- Completed BSc (1990), MSc (1992), PhD (1996) in Systems Design Engineering at UW
- Variety of u/g co-op experiences
  - Later positions in research were more invigorating
- Worked in industry (AGFA nee Mitra)
- Tenure track position @ U. of Calgary
- Returned to Waterloo and promoted
- Active researcher, recognized teacher, enjoy administration

## Beginnings ...

- Most faculty learn to become a faculty member by their own supervisor
  - Much like learning how to drive from your father! Learn the good habits and the bad habits as well.
- Faculty positions are so “open ended” that one needs to build your own repertoire

## Background

- Personally spoken to PhDs (talented!) who
  - Are uncertain as life as a faculty member
  - Do not know how to prepare for such a position
- Presentation provides insights into academic lifestyle
- Or perhaps I will scare you away from being a faculty member!!
  - In some ways, it is a daunting job that is not well suited to everyone

## Disclaimer

- My own thoughts based on my own experiences
- Tried to keep things fairly generic
- Opinions and emphasis are primarily my own (did have feedback from colleagues)
- Not discipline specific, but keep in mind that I am coming from an engineering (professional school) perspective
- Other faculty will have their own spin
- Also, other countries, provinces, universities, departments, schools, etc. will have variations

## Outline

1. Landing Your First Faculty Position
2. Living Your First Faculty Position

Introduction

## Participation!!

- Feel free to ask questions and participate ...
- My son Bryan and Luke will also be participating once in a while ...

Introduction

## 1. Landing Your First Faculty Position

- Wishful thinking
- Hard enough just to get an interview ...

Building an Education

## Landing Your First Faculty Position – The Reality

- Can be frustrating experience even getting an interview
  - Inexperience
  - Many other qualified people around
  - Many applicants (10s or 100s of people) to one position
  - Suitable position may not be available
  - Timing
  - Need to have proper credentials
  - Some job ads may be written to hire specific person
  - Might not have perfect match to job description
    - Departments often look for certain types of people (synergy) rather than people with specific expertise

Landing Your First Faculty Position

## Landing Your First Faculty Position – The Reality (cont.)

- Do not despair!
  - Note: same few people get interviews to multiple positions; if these are exhausted, you could be next
- Do not worry about location – grow to enjoy any university city in Canada

Landing Your First Faculty Position

## Do Your Homework

- Contact established people in same field
  - Should be working conference circuit as grad student
- Faculty positions in Canada well-advertised
  - Read *University Affairs*
  - Start doing this during PhD to develop a sense of what is out there
  - Note distinction between tenure-track, non-tenure track, and lecturer positions

Landing Your First Faculty Position

## Interviewing

- So, you finally land an interview – what should you expect?
- Be proud of yourself, and stay confident
- Obtain clear understanding of interview expectations
- Develop sense of department and faculty
- Interviews are generally full day; sometimes two
- Expect to make a presentation and expect a group interview

Landing Your First Faculty Position

## Interviewing – The Presentation

- Try to schedule downtime before presentation
- Who will be in attendance? How many?
- Make sure something in the talk for everyone
  - People may be outside of your research area
- Do not claim expertise outside of your true expertise (undermines credibility)
- Consider including the past (what others have done), present (what you have done), and future (what you plan to do next)
- Do not go over time

Landing Your First Faculty Position

## Interviewing – Committee Interview

On the hot seat! Expect to be interviewed by multiple people. Prepare for fundamental questions:

What “fundamental questions” should you expect?

Landing Your First Faculty Position

## Interviewing – Committee Interview

On the hot seat! Expect to be interviewed by multiple people. Prepare for fundamental questions:

- How will you start/grow your research program?
- Where will you obtain funding?
- How many students are you expecting to supervise?
- How will you interact with other faculty?
- What courses are you willing/able to teach?
- What research direction will you take?
- How do you supervise?
- How do you balance your work with your personal life?
- Not allowed to ask questions of personal nature, but this info is often volunteered

Landing Your First Faculty Position

## Interviewing – Other Expectations

- Meeting with Deans or perhaps other senior administrators (not typical)
- Note that all of these people can provide feedback
- Meeting with students: u/g and/or graduate
- Going out for lunch/dinner
- May be requested to give a teaching lecture
- Possible 2-day interview
- OVERALL: hiring committees look for someone who will be a good colleague (professionally active and collegial)

Landing Your First Faculty Position

## Interviewing – Info Gathering

- What information should you gather before/during the interview????

Landing Your First Faculty Position

## Interviewing – Info Gathering

- Starting salary expectation (bonuses?)
- How are salary increases implemented? How is merit evaluated?
- Lab space: what is assured? How allocated? How much?
- System support: how much? How effective? Costs?
- Grad student funding: how implemented?
- Start-up funding – how much?
- Orientation for new faculty?

Landing Your First Faculty Position

## Interviewing – Info Gathering (cont.)

- Tenure: success rate? Process? Expectations?
- Office location
- IP rights (by university policy)
- Nature and number of courses to be taught
- Teaching courses in your field of interest?
- Will your career grow in this location? Is it perhaps a solid stepping stone to something else?

Landing Your First Faculty Position

## Job Offer???

- Need a sense of what your starting salary should be when you are interviewed
- Faculty making the offer will have their own methods for setting a starting salary
- May be room for negotiation, if you have cause
- Typically, wait weeks to hear back (could take longer!)
  - Rare: offer during the interview

Landing Your First Faculty Position

## 2. Living Your First Faculty Position

- So, you landed your first faculty position!!
- What do you do next!??
- First 6-12 months of a faculty position involves considerable orientation and adaptation
- Learn about things that everyone else takes for granted e.g.
  - How is the university pension plan setup?
  - How do I setup voice mail?
  - Who do I contact in the research office?

Your First Faculty Position

## Living Your First Faculty Position

- First faculty position is exciting, but there are frustrating aspects as well
- New faculty members find their jobs isolating
  - No close contact with peers/colleagues
  - Need to make effort to get to know people
  - Group research projects help this
  - Academics work independently e.g. lecture preparation, writing grant proposals & papers, etc.
  - Administration involves more people contact, but new faculty have little admin work

Your First Faculty Position

## Having a Family

*Based on interviews with women faculty at UW*

- Have a realistic perspective
  - Find out how much support you have (spouse)
  - Talk to multiple faculty (men & women) in your department
- Maternity leave
  - Not always possible as graduate student
  - Can be few months to a year in Canada
  - Might only be a few weeks in the U.S.

Your First Faculty Position

## Having a Family (cont.)

*Based on interviews with women faculty at UW*

- Paternity leave
  - More common now; men stay home, help spouse, and write papers on the side
- When to have kids
  - During Grad School, post doc, or after?
  - No perfect time: do what is best for you and try to plan things ahead of time

Your First Faculty Position

## Frustrations

- If this is a new university to you, undoubtedly find that they do things differently
- Learning to balance teaching, research, and administration plus personal life is a challenge
- No one tells you how to organize your office/lab – you will not have a personal secretary!!
  - Creating a filing system and learning what to keep and what to toss helps to maintain your sanity!!
- Hint: keep a file on all relevant paperwork for your annual report
  - Update CV in “real-time”

Your First Faculty Position

## Suggestions To Help Transition

- Identify one or two mentors
  - People you can turn to for occasional advice
  - Chat with them periodically
  - May have to push a bit
- Make your presence felt in department
  - Contribute at meetings
  - Be visible
  - Don't be negative
  - Maintain cordial relationships with everyone

Your First Faculty Position

## Making Presentations – Important Skill

- Learning how to make strong presentations is an asset as a faculty member
- Strong presentation skill an asset for administration, teaching, and research
- Evaluation and self-assessment important
  - e.g. may be an on campus teaching resource office to assist this process (CTE)

Your First Faculty Position

## Tenure

- Surprise! Need to start thinking about tenure when you first start your faculty position
- Tenure is still important: ensures academic freedom
- Distinction: Assistant, Associate, Full Professorships

Your First Faculty Position

## Tenure (cont.)

- Difficulty: need ~6 references
  - Problem? Need to be at arms length yet need to know your work (Catch-22)
  - Conferences/Workshops give opportunity to flag potential references
  - Need to consider personality as well technical background

Your First Faculty Position

## Tenure (cont.)

- Strong contributions in teaching and research will support tenure application
  - Don't focus on administration
  - 40/40/20 model, in general
  - Maintain CV – easier to prepare tenure application

Your First Faculty Position

## Teaching

- Teaching: defined as not only lecturing to classes, but also supervising students
- Department should provide reduced teaching load in first year
- Helpful to develop your own teaching mandate (big picture – what do you want to accomplish)

Your First Faculty Position

## Teaching – Do's and Don'ts

- Do: expect to spend considerable time and effort teaching a course for first time
- Do: in subsequent offerings, recreate notes
- Do: make use of existing course materials
- Do: build material to be used in future offerings
- Do: seek out competent TAs
- Do: try to minimize number of new courses
- Do: teach grad course in field of expertise
- Do: contact teaching office for advice
- Do: make a commitment to teaching
  - Very rewarding part of the job

Your First Faculty Position

## Teaching – Do's and Don'ts

- Don't: spend all of your time teaching
  - Teaching is scheduled time; need to schedule research time as well
- Don't: expect that all students will enjoy your efforts
- Don't: make courses unnecessarily tough; try to remember what it is like to be 18!
  - Being fair leads to better learning and improved respect for your efforts
- Don't: lecture unprepared
- Don't: expect to be a great teacher immediately; like research, learning how to teach takes time

Your First Faculty Position

## Supervising Grad Students

- How does one supervise grad students?
- People follow their own models
  - Model #1: many grad students, focus on most successful
  - Model #2: few grad students, spend time with all
- How do I supervise?
  - Take on ~6 grad students, 1 PDF, co-op, URA, 3-6 workshop projects during single term
  - Feel that this is at a breaking point
  - Try to handle each grad student based on their own skill set
  - Avoid trap of spending too much time with weaker students ("10% of students require 90% of the supervision!!")

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## Starting a Research Program

- How in the world does one start a research program???

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## Starting a Research Program

- Helpful to frame your research into a more global impact perspective ("big picture")
  - Call something "your own"
- What are the implications if your research is successful? Long term? Short term?
- Who does your research help?
  - Need to demonstrate impact e.g. Social? Environmental? Economical?

Your First Faculty Position

## Why Define a "Big Picture"?

- Helps move research in constructive direction
- Allows you to informally let anyone know the nature of your research (Elevator Description)
- If research perceived as irrelevant:
  - Difficult to secure funding
  - Difficult to find interested, quality grad students
  - Difficult to find referees to support your tenure application

Your First Faculty Position

## How to Let the Research Proceed

- Work on focused, manageable, coordinated pieces that contribute to "big picture"
- Some planning and creativity required for this
- Difficult to follow any research plan – why?
  - Need grad student with certain backgrounds
  - Need grad students at particular times
  - Each grad student has different abilities
  - May not be able to access data in proper timeframe
  - Need funding at certain times – may not happen
  - Takes longer to complete phases than expected

Your First Faculty Position

## Rewards of Successful Research

- Self-fulfillment
- Peer recognition
- Spinoffs: textbooks, consulting, products
- Benefits to society
- Improved teaching
- Note: research is ongoing; rare to have any feeling of completeness (unlike teaching)

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## Generating Research Ideas

- Any academic typically has a parallel major projects
  - Ideas for these can occur at any time
  - Important to write ideas down
- "There are two important reasons for writing down your ideas. First, joining mental and physical effort and externalizing ideas often helps clarify them. Second, as any composition teacher will verify, the very act of writing an idea has a way of triggering other ideas."
  - V. Rugierro, *The Art of Thinking*, Harper Collins, 1995, p. 125

Your First Faculty Position

## Supporting a Research Program

- Many aspects to be considered:
  - Grant applications (grantmanship)
  - Recruiting grad students
  - Attending conferences
  - Art of publishing
- More details on these ...

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## Individual Grant Applications

- Make sure project "fits" the funding program
- Meet with university research personnel to find out about various programs
- Read and reread grant application requirements
- Follow all directions carefully
- Have established researcher review application
  - Secure a commitment well in advance and do not give it to them the night before its due!
- Suggestion: work on draft grant application for your supervisor

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## Group Grant Applications

- Many science programs involve group grant applications
- Synergy: make use of extended list of experts in a particular field
- NSERC NCEs (Networks of Centres of Excellence) use this model; excellent means of starting research career
  - Create contact with external researchers
  - Secured funding for 3-4 years (renewable)
  - Drawbacks: potentially limited funding; reporting cycles; AGMs to attend

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## Recruiting Grad Students

- How to find competent grad students?
  - Undergraduate program (hire as co-ops or URAs)
  - Conferences (MSc students looking for PhD)
  - Contacts at other universities
- Many international students will contact you
- Advice: meet before accepting or accept based on trusted reference
- Recall: PhD students are a 3-4 year commitment
- Strong graduate students make research life far more enjoyable

Your First Faculty Position

## Attending Conferences

- Helps to make sure you "stay connected"
- Identify conferences that fit your research program
- Useful for making contacts (e.g. for tenure application)
- Pick talks carefully; spend time chatting
- Have some fun! Show off work and travel a bit

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## Art of Publishing

- Publishing in refereed journal publications can be frustrating
  - First paper often rejected
  - Do not take this personally
  - Rewrite and resubmit, perhaps another journal
- Papers not generally double blind reviewed (reviewer knows author names)
- "Expert" reviewers may not be so expert
  - Could be grad students or PDFs who have a narrow viewpoint
- Often need to defend your submission
  - Send rebuttal for reviewers and letter for editor

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## Art of Publishing (cont.)

- Should learn how to publish during PhD program
- Accept that reviewers may be correct
- Publishing takes time and effort
- Always submit best work (do not just fish for feedback – leaves negative impression)

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## Reviewing

- If you are publishing, you should also be contributing to the review process
- Review papers where you have proper expertise
- Do not be critical
  - Be factual and use references to support
- Multidisciplinary paper: indicate expertise area
- Not your job to correct grammar, etc.
- Assess the technical merits
- Suggestion: use major and minor areas
- As grad student, request review opportunities from your supervisor

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## Authorship

- Authorship is important
  - Who and what order of appearance
- Need to develop a sense of what defines authorship in your area
- Generally, author must contribute in a "substantial" manner
- Substantial:
  - Conducting research, extensive writing, core ideas
  - Would the paper have been published without the technical help of the person?
- Not substantial: editorial comments, co-supervision, funding, research director

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## Building a Research Program

- Need to wear many hats!
- Need to be a financial manager, fund raiser, secretary, cheerleader, idea generator, prolific writer, promoter, and researcher (if you have time!)
- Build a research identity
- Have a central focus
  - Need to be identified as an expert in some area
- Build some diversity, especially away from your doctoral supervisor

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## Administration

- Gradual "creep" into your professional life
- Need to assess your own personal goals
  - Very difficult to excel in research, teaching, and administration simultaneously
  - Not enough time in the day to do this
- Advice: early in your career, focus on your teaching and research; experience will then lead you into preferred administration roles

Your First Faculty Position

## Summary ...

- Keep in mind this is a summary of my experiences: yours may be very different
- Hope that you consider a faculty career

Summary of Presentation

## More summary ...

- Personally enjoy being a faculty member
- Encourage talented people to follow a similar path
- Good luck in your career planning!
- Don't forget to laugh as much as you can!

Summary of Presentation

## Thanks ...

- Handful of "reviewers"
  - Profs. Alex Ortiz-Lopez (Math), Ellis Ledrew (ES), Jon Oakman (Psychology), Greg Dudek (McGill)
- UW staff
  - Genevieve Desmarais, Tracy Penny Light, Donna Ellis, Barbara Bulman-Fleming

Summary of Presentation

## Thanks ...

- To Bryan and Luke!!!

Summary of Presentation

Questions???