PANEL: MAKING THE TRANSITION FROM GRADUATE STUDENT TO FACULTY MEMBER

Organizer: Anne Condon, U. British Columbia

Panelists: Erin Young, Ph.D Candidate, UBC
Donna Dykeman, Ph.D. Candidate, UBC
Daniela Constantinescu, Assistant Professor, UVic,
Elizabeth Croft, Associate Professor, UBC

Research and teaching careers in academia are rewarding and offer unique opportunities for innovation and scholarship, to make a difference in society, together with a chance to make a real difference in the education and lives of students.
In this workshop, female faculty members and senior graduate students in Science and Engineering will share their experiences and strategies for success in establishing an academic career.
Topics include: How to develop a marketable vita. What to expect in an interview; what to do and what not to do; obtaining research funding; what to do when a paper or grant proposal is rejected; starting as a teacher; advising graduate students; establishing collaborations; time management.

Panel Plan

- The CV
- The Interview
- Funding
- Dealing with Rejection
- Starting as a Teacher
- Advising
- Collaboration
- Time Management
- Group Discussion

The CV

Donna Dykeman

What will make your C.V. stand out amongst 50+ candidates?

A combination of content and style

Key Content:

Research accomplishments

- Journal Publications, Scholarships, Awards
- Participating in Key Research
- Presenting at Conferences

C.V. Content

- Name and Contact info.
- Education
- Thesis/Dissertation Abstract
- Coursework – optional
- Work Experience
- **Teaching Experience**
- **Research Interests**
- Skills – expertise, special (languages)
- Scholarships/Awards/Honors/Achievements
- **Publications/Presentations**
- Professional Associations
- Community Service - optional
- References

C.V. Style

- Personal, neat and organized
  - Use bullets, spaces, bars / italics to emphasize
  - No spelling or grammar mistakes
  - List relevant experience / expertise (not lab skills)
  - Publications list (e.g. NSERC style)
    - List accepted and submitted papers, not in preparation
- Many on-line formats available

Job Searching

Start by Connecting Up

- Your Supervisor
- Professional Societies
  - Membership
  - Involvement
- Events
  - Conferences
  - Exhibits, art openings
- Mentors
  - Find your own
  - Programs

Finding the Ads

- Department websites
- Society newsletters (e.g. Chem. Eng. News, ACCN, SCWIST)
- Journal of Higher Education

How many should I apply to?

How can I leverage my presence?

The Interview

Daniela Constantinescu

Interview

- Your goal: get them to know you.
  - Self-starter.
  - Leader.
  - Interested in colleagues' work.
  - Scientific curiosity.
  - Can answer to: "What will you do here if we hire you?".
- Their goal: minimize risk.

Employer's viewpoint

- Hiring is risky:
  - Infrequent openings.
  - Not enough researchers.
  - Limited start-up funds.
  - Scarce lab/office space.
  - Interaction increases productivity.
  - Many "hit the ground running".
- Minimize their risk!

Before interview

- Learn about:
  - Audience at your talk.
  - Department & university.
  - Collaborations.
  - Local funding.
  - Courses.
- Prepare questions.

Campus visit

- Etiquette:
  - Dress code for your field.
  - Lunch/dinner small talk.
- Talk:
  - Communication skills & research vision.
- Interview:
  - Be a potential colleague.
  - Avoid speaking at length about unimportant things.
  - Be specific in answers.
  - Get along with others.

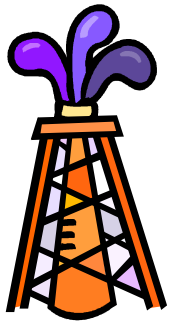
Talk

- Story telling: what you have done & plan to do.
- Plan & rehears.
- Be confident.
- No fillers!
- Pleasing (not fancy) visuals.
- Understand question before answering it (Take your time and ***LISTEN*** to the whole question!!!).

Research Funding

Elizabeth Croft

The Sources



- **University Startup. Negotiate as much as possible as part employment package.**
- NSERC –www.nserc.ca
  - Discovery Grants
  - Industry Partnership Grants (CRD, IPS, I2I)
  - Strategic Research Grants
- CIHR (Canadian Institute for Health Research)
- NCEs (National Centres of Excellence Programs – e.g. AUTO21)
- CFI (Canada Foundations For Innovation)
- Provincial Funding Agencies (BC Science Council)
- Government Agencies (Workers Compensation Board)
- International Agencies and Partnerships
- Others…

Get information from your University Research Services office. Make them work for you!

Canadian Foundation for Innovation

- Expected that all new faculty will apply to CFI new opportunities.
- Must apply within time limit (about 18 months).
- Funding for large infrastructure pieces to get you started
- Success rate is currently very good.
- Get assistance from research services office for grant writing help, matching funds and in-kind support.
- Vendors are VERY helpful, and can often provide CFI matching discounts.
- Make sure you have negotiated lab space up front for the equipment you are requesting.
- Include installation costs, maintenance, etc.
- Invite other faculty as co-investigators to show usefulness of the request (long term value of infrastructure)

NSERC Discovery – a long process

- August 1/06 – Form 180
- October 24/06– Form 100/101
- March/07 – Announcement of funding
- April 1/07 – Funding commences
- Sept 1/07 – Graduate student arrives
- May 1/08 - Graduate student starts active research

More than two years before publications can even start to flow from this funding!!! Therefore, immediate start up funding is essential.

A Steady Stream

- NSERC grant plus one or two other grants on which you are PI
- Other grants where you are co-investigators "don't count"
- Be sure to apply for an **equipment grant** with every NSERC application. If you don't get it, just keep revising and resubmitting. You can request an equipment grant to PAY someone (like a student) to BUILD specialized equipment for you.
- Engineering - good to show industrial in-kind support, letters, etc on EVERY application.

Some tips…

- Use successful grant applications from other faculty as templates
- Good idea to volunteer for granting agency reviewing committees in order to understand how the process works
- Have senior faculty who have been on these committees review your application well in advance
- Start early and submit early! The NSERC submission site becomes glacially slow in the last 3 weeks before the grants are due
- NSERC DOES NOT ACCEPT LATE APPLICATIONS

Dealing with rejection…

Erin Young

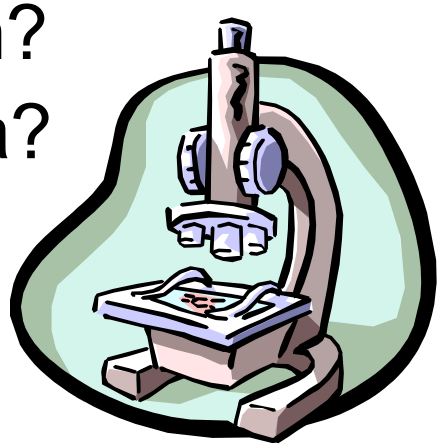
Grant Rejections

- Don’t take it personally! And don’t give up…
- Get feedback – sometimes you have to ask the agency for this, but you should (even if grant is approved)!
- Look for other opportunities
- Track results of your efforts
- Reassess and improve for the next round

Rejected for Publication

- It's not personal! Try to assess the situation objectively:

- Did you send it to the right journal?
- What impact will the work have on your field?
- Is the title of the manuscript representative?
- Do the data support your interpretation?
- Is there a better way to collect the data?
- Are the results statistically significant?



Responding to critics:

- Minor Revision: Great!
  - Acknowledge the reviewer's comments and make suggested changes, even if they are minimal
- Major Revision: May involve significant work.
  - Prioritize reviewer's points and begin work on most important ones
  - Do your best to follow their advice, but if you see a better way to address the concerns, do it
  - Write a point by point letter outlining how you have addressed each issue

Rebutting a decision

- You can rebut a rejection decision. Weigh your options carefully. Your energy might be better spent making some changes and sending to another journal
- If you do decide to rebut:
  - Be polite!
  - Write the journal editor a letter explaining clearly why you believe the reviewers came to the wrong decision

Starting as a Teacher

Daniela Constantinescu

Starting to teach

- Challenge: set up courses vs. set up research program.
- Teaching: pass/fail grade.
- Be mindful of time spent teaching.
- Seek advice about course mechanics.
- Have a positive attitude about students.

Course planning

- Student background & interests.
- Objectives.
- Scope & content.
- Plan feedback & student evaluation.
  - Start early, continue throughout.
- Syllabus.
- Do not spend time on Power Point presentations!

Delivery

- Competence & respect for students:
  - Know your stuff.
  - No jumps.
  - Flexible & reasonable pace.
  - No spelling errors.
  - Worry about your accent, but not too much.
  - Don’t be overly funny.
- No Power Point overindulgence.
- Difficult questions:
  - Think for 5 secs.
  - Admit you need more time.
  - ALWAYS come back with the answer.

Course mechanics

- Early mid-term.
- Get students to work constantly.
- Examples from what they know.
- Do your own examples.
- Encourage personal interaction, especially among students.

Advising

Elizabeth Croft

Choose Students Carefully

- Your future is in their hands…
- They will represent you to the department, to your colleagues at conferences and other departments
- Their success is reflected back to you in evaluation of your grant applications, and tenure considerations (training of HQP)
- They take a LOT of your time

Start them up well

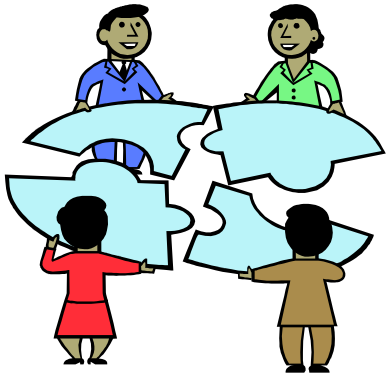
- Establish a set of courses from good instructors that support them to do research in your area. Look to other department courses as needed
- Get courses out of the way early
- Find co-supervisors where possible, spread the load
- For Ph.D students, establish a research committee for them early
- Have student write a plan for their research within first 3 months including a GANT chart
- Should spend 1 day/week on research while doing courses.

Keeping them on track

- Weekly face to face meetings
- Structure the structure to meet the needs of the student
  - Weekly reports
  - Conference paper deadlines
  - Milestones
- 1-2 formal presentations per year

Keep them connected and engaged

- Weekly group meetings
- Encourage interaction with other research groups
- When overwhelmed, help them to break problems down
- Don’t let them spin their wheels too long
- Know when to cut them loose



Expectations

- That when completed they are more of an expert in their topic than you are.
- You are providing guidance and experience, but they are to self study and to develop new knowledge. You give directions, not maps.
- Masters student: 2 conference papers and maybe one journal paper.
- Ph.D. Student: at least 3-4 journal papers.

Academic Collaborations

Erin Young

Why collaborate?

- Broaden your experience, get exposed to new ideas, potential for new and interesting science
- Helps to determine new research directions after PhD/postdoctoral work
- Balanced with strong individual research program, collaborations important for tenure
- Increased opportunities for funding and equipment
- Increase your visibility in the field

Getting started

- You can collaborate within your university (i.e. interdisciplinary research centres), or externally (nationally, internationally)
- Start networking during your PhD! Get to know your supervisor's contacts, group alumni
- Meet people at conferences
- Attend seminars in other departments
- Use the literature to identify potential collaborators – sometimes cold calling works

Tips

- Establish clear expectations at the start of the project (goals, task management, timeline) based on skills and resources of those involved
- Good use of phone/email/face-to-face meetings
- Make sure you do what you say you will! (or be clear about why you can't follow through)

Some natural types of collaborations:

Theory (or Modelling) and Experiment

New materials/products/samples and Characterization

Industry and Academia

Time Management

Donna Dykeman

Time-Management

Work-Life Balance

Many recipes for priorities – write yours!

Some ingredients to consider

- Time for yourself (reflection, fitness, hobbies)
- People in your life
- Commitment to consistent work hours
- Extra curricular professional work

Time-Management

Professional Life Balance

- Goal setting and monitoring
- Know your best working time
- Uninterrupted working time
- Get enough sleep
- Procrastination
- Delegate
- Saying no

“Remember that you are not a superwoman”

Moyra McDill, Anne Condon, Mary Williams

Get Connected

- Why be involved in extra curricular work ?
  - Meeting other people in your field(s) of interest
  - Opportunities to share your research
  - Needed support
  - Skill building
    - Grant writing, Speaking, Program Development

Resources / Citations

- UBC Workshops & Career Services
  - Writing a Winning C.V., Marlene Delanghe
  - Academic Careers in the Sciences, Dr. Mark MacLachlan
- Time-Management Resources
  - www.grad.ubc.ca/students/supervision
  - http://www.cs.ubc.ca/~condon/ccwest/CCWEST

Conclusions

- Be proactive
- Be mentored
- Understand the process and the expectations of others (tenure, granting, students)
- Be balanced in your life and in your expectations
- Remember to have fun!