SIfA EMCR Workshop 2015 – Session 2, Panel 1
by Christene Lynch and Luke Barnes

Panel 1: Ilana Feain, Marton Hidas, Andrew Layden,
Louise Ord, Geoff Sims, Edwin Tay

Moderator: Lisa Fogarty

Edwin: Software engineer at Google. Enjoys his position at Google because of the number of interesting problems he works on that involve ways to communicate information to users.

Marton: Position involves data management and working with metadata (information about the data collected). The computing tools he currently uses to move and manage the data he learned while at his job. Skills that he found valuable from his graduate degree are communication skills, people skills, working with big data, and computing and numerical skills.

Andrew: Has a PhD in space physics. Currently works in trading research where he models market data. Skills that he believes to be valuable for his position that he gained through his degree are exposure to programming languages and understanding what a good model looks like (or how to model data appropriately).

Ilana: Has a PhD in Astronomy and was an ASKAP project scientist. Currently the CEO of Nano-X, a start-up company. Skills she found useful from her work in astronomy were skills to do with imaging.

Geoff: Data analyst for Quantum. Works with big data from large companies (e.g. Woolworths) to develop prediction models in order to improve their business. Found his skill using Linux and Python useful.

Louise: Current position involves analysing social welfare data to study the effects of government policy on people, advising the government on the development of future policies. Found that her astronomy background gave her skills in being able to see the big picture of a problem while also allowing her to perform the numerical details to get results.

Q: What is important in interviewing for a position that has a specific set of skills or expects a specific degree (i.e. software engineering or finance)?

Be sure to understand how your skill set is useful to the company you are interviewing with; be sure to research the company for how you fit into their company.

You may have to complete a test. An example that was given was that you may be given a set of data and then tested whether you could accomplish basic data analysis tasks.

You do not necessarily need to know specific skills (for finance or software engineering as an example) but you need to know how you can benefit the company. You need to own your background. Acknowledge it, and show your potential employer why is it useful. In particular, always cater your CV: I have these skills, and they are useful to your company because …

You should be interested in what the company does and have an explanation for why you are applying for the position at their company (what drew you to the position).

Q: What part of your technical background was most useful for getting and doing your job?

Edwin: The most useful part of your education isn't the finer details of programming, but rather critical thinking skills, and the ability to challenge established ideas to look for new ways of doing things.

Marton: What got him his position was his communication skills and working with large amounts of data.

Geoff: the biggest assets from his astronomy PhD were Unix and Python.

Louise: An important skill was big picture thinking in a project. That is, bringing the technical details into the right context and right use within the larger goals of the project.

Q: How did you gain the knowledge/skills you need for your current position?

Andrew: Optiver has a 6-week training program when you start your position. Additionally there are finance journals and textbooks that you can use.

Edwin: Team members are expected to be a source of knowledge. There is a “Ramp Up” program that teaches you the infrastructure and terminology of Google but not specific skills (again these are expected to be taught to you by colleagues).

Q: In pursuing a career path that is outside our comfort zone, what is the first step?

Look on Seek or other non-academic job listing sites for positions.

Contact people directly that work in places you are interested in working.

Talk to people who have made a similar transition; they may have resources that may be helpful for making the transition. Found this useful for support through the transition. For example, in finance, try Googling "econophysics". Or, even better, talk to someone about econophysics. Having an idea about what you want to do will help you chase down the right people and the right information.

Networking with people in the field you want to transition to is very important.

Q: What is your success rate? How many positions did you apply for?

Andrew: Very successful, only needed to apply for the one position in industry. But this was after a number of failed attempts to find a job in academia.

Marton: Applied for 4 positions; found that ‘cold calling’ (directly calling people at company interested in working for) and networking were very helpful for getting his position.

Geoff: Low, applied for 30 or more positions. Also found networking useful for securing a position.

Louise: If you use a headhunter do so with caution. Be sure they know what you want in the position.

Generally agreed that the difficulty you will have finding a position will depend on the current job market and economic climate. It can be difficult, but working through you personal network can greatly increase your chances.

Q: Would you recommend interning at different places?

Taking time off in general not a good idea unless you can show that you had a specific reason for the time off; an internship would be a good reason for time off.

However, if you do an internship make sure you aren’t taken advantage of and in most cases you already have the skills required for a position without needing an internship.

Q: How difficult was it to change your identity (no longer a research scientist or astronomer)?

Ilana: Difficult to change mindset so that she didn’t consider herself an astronomer any more.

Andrew: Going to school and doing research as a physicist/astronomer makes you think in a certain way (good at approaching problems) and others at your

new company will identify these skills/abilities with you because of you previous identity.

Others commented that you should own your previous identity; that other people at your new company will identify you as ‘The Astronomer’ or ‘The Physicist’.

Q: How did you feel in your new position?

Ilana: Left permanent (tenure) position in academia for a less secure position, however she is much happier in her current position.

When looking for a new field, think about what activities (coding, writing, public speaking, etc.) you want to do, not necessarily the job’s name.

Also think about what type of work/life balance you would like. Look for work that is challenging, relevant, valuable as part of a team, and utilises your unique set of skills. Do you need a work environment that has flexible hours? Do you want to be able to take work home with you or would you rather it stay at work?

Q: How much do you work?

Louise: Work hours are flexible and works only 4 days a week.

Andrew: Works 40 hours a week and cannot take work home due to confidentiality issues.

Ilana: Works same hours as academia.

Generally found that there is not a 9-5 attitude for most places and that work/life balance is important.